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CAT BREEDING AND GENERAL MANAGEMENT

CAT BREEDING

AND GENERAL MANAGEMENT

by P. M. SODERBERG, B.A.

with sixty-one photographs in the text
and nineteen drawings by
Evelyn Cockayne



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THIS BOOK IS PRODUCED IN COMPLETE
CONFORMITY WITH THE AUTHORIZED
ECONOMY STANDARDS

TO

SHEENA

A BLUE-CREAM

whose affectionate attention made the writing of this book almost impossible

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PREFACE

THIS book could not have been written without the active co-operation of many well-known cat fanciers who have generously placed at my disposal the results of their own long experience. As will be seen in the text, a few sections have been written by successful breeders well known to all cat lovers. A very large number, both men and women, have helped me in many ways, but to mention them all by name would make a list far too long. Thus, to all who have helped, whether their contribution has been large or small, I tender my thanks for making this book possible.

It will be noticed that in the text breeders are invariably regarded as being of the male sex. This is, of course, very largely a reversal of the facts, for most cat breeders are ladies, and to them I offer my apologies. Such small points of incorrect emphasis are bound to occur when a book dealing with cats is written by a mere male.

The sections dealing with feeding are of little value to fanciers at the present time when rationing is still with us, and when there are definite restrictions on the use of most foods for animal feeding. The feeding suggested, therefore, must be deferred; but one naturally hopes that within a short time all such restrictions will be removed. In the meantime, we must continue to feed our stock on the war-time diets which have been so difficult, and yet largely successful, during the past eight years.

An attempt has been made to introduce some of the elementary facts of genetics in the hope that breeders will wish to read more about the science of breeding. I myself have gained much valuable knowledge from the published work of Dr. E. B. Ford and Dr. Hagedoorn. Some of the books written by these eminent geneticists will be found in the bibliography at the end of the book.

A section has also been introduced on Colour Breeding. To the breeder this is a subject of great interest, but unfortunately the amount of research with cats has not been great. Although the publications mentioned are not likely to be found in many local public libraries, they can be obtained by the librarian from the large scientific libraries at the Science Museum in London and elsewhere.

The writing of this book has given me considerable pleasure, and I shall feel amply repaid for the work which it has entailed if the same feeling is experienced by the reader. If it helps the beginner, and at the same time becomes the means of adding a few more members to the Fancy, it will have accomplished its object.

If very occasionally the reader notices a similarity of expression between some of the ideas set out in this book and articles on Cat Breeding written by S. E. Archer in "Cats and Kittens," this need cause no surprise, for he and I are one and the same person.

ACKNOWLEDGEMENTS

THE author and publishers gratefully acknowledge the kindness of the following in supplying photographs of cats reproduced in this book: Miss M. Alexander, Mrs. T. C. Askew, Mrs. D. E. Axon, Mr. H. W. Basnett, Mrs. J. Braund, Mrs. Brunton, Miss M. Bull, Miss Cathcart, Mrs. A. H. Cattermole, Mrs. M. G. Cook, Mr. Thomas Fall, Mrs. Finch, Miss J. M. Fisher, Sir Newman and Lady Evelyne Flower, Miss M. C. Gold, Miss H. Hill Shaw, Mrs. D. Hindley, Mr. F. G. Jackson, Mrs. James, Mrs. O. M. Lamb, Miss E. Langston, Mrs. F. Neate, Mrs. M. E. Oglethorpe, Miss W. Peake, Miss K. Pelly, Miss M. E. A. Pike, Mrs. T. Rendall, Mrs. Sharman, Miss A. Steer, Mr. B. A. Stirling-Webb, Lady Eardley Wilmot.

A

Abscesses

It is not at all uncommon for a cat to develop an abscess as a result of scratches or bites. Occasionally, also, an abscess will result from unsuspected tooth trouble. These are of a type which can be dealt with by the average breeder, whereas the rarer internal abscess is definitely a matter for the veterinary surgeon.

Swellings, with indications of considerable pain, are the usual symptoms of an abscess in its early stages. The skin is often very shiny and there are obvious signs of inflammation. The best treatment would be poulticing, but this is by no means easy with a cat which is not seriously ill and as a consequence resentful of any form of bandaging. In fact, one can safely say that nine times out of ten poulticing is useless. Usually the best that one can do is to bathe the affected part with hot water every two hours until a head forms on the abscess. When the abscess is ripe an incision must be made through which the pus may be squeezed. A darning needle well sterilized in a flame is the safest instrument in the hands of an amateur. The great mistake usually made is the too early abandonment of the treatment. After each treatment some non-poisonous but antiseptic ointment should be put into the cavity. The closing of this cavity must certainly not be permitted until one is sure that no further pus is forming. Most cats, after several treatments, seem to realize that the operation gives them relief, and submit to one's efforts with a minimum of resistance. It is quite common for the cure to be complete in a week when the abscess has been noticed in its early stages. The treatment of the future may well be by the use of penicillin ointment, but at present supplies of this very valuable substance are not on the market for general use.

There is another type of abscess which one meets occasionally where a cat has been neglected. It is a swelling of the ear flap, the result of scratching when the cat is suffering from deep-seated canker. The treatment is exactly the same as that suggested for the ordinary abscess. Prevention, however, is by far the

best form of cure, and the reader should pay particular attention to the sections of this book dealing with the prevention and cure of canker. An unfortunate and frequent consequence of an abscess on the ear flap is that the ear itself may shrivel in parts and ruin the appearance of the cat.



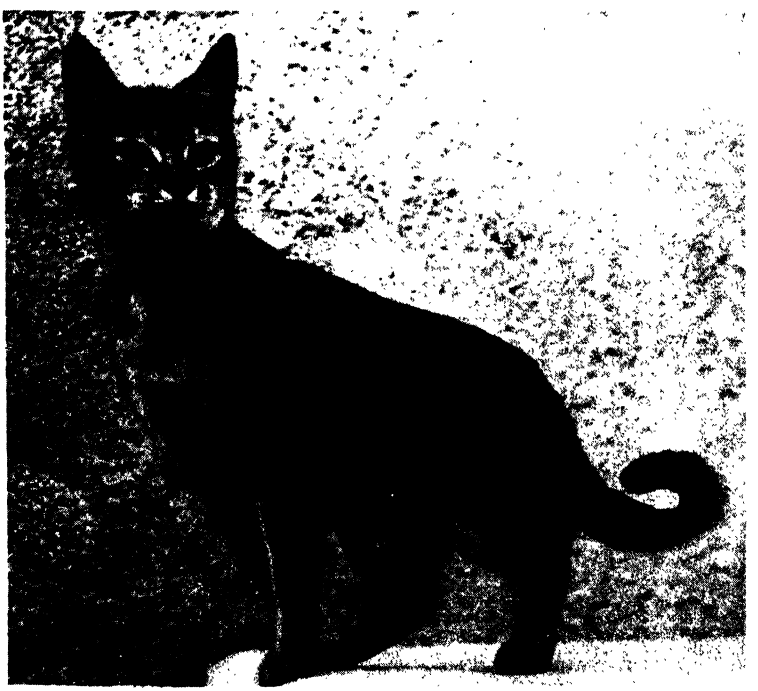
ABYSSINIAN
CH. CROHAM ISANA

Abyssinian Cat, The (*by Harold W. Basnett*)

It is fitting that in a book on the feline race one of the first sections should be devoted to the Abyssinian cat. In the opinion of many eminent zoologists, and judging from the various mural and other paintings which have been preserved to us from the days of the Pharaohs, this cat is regarded as the nearest approach to the Sacred Cat of Ancient Egypt. It is remarkable how quite a fair type of Abyssinian will crop up from time to time from ordinary domestic cats, and this is considered to be a reversion to ancient type.

To those who have not seen a specimen of this breed, it will be of interest to note that in colour there is a striking resemblance to the wild rabbit, but a closer examination shows the undercoat of the cat to be rufous. They are hardy, and have a delightful temperament, while a first-class specimen is a very elegant animal. The character of most Abyssinians is very gentle and rather shy, and the animal is not given to taking readily to strangers, but is very affectionate to those it knows.

The breed has been kept in England for very many years with at times a lone person retaining just sufficient stock to keep the flag flying. Here it is appropriate to mention the late Mr. H. C. Brooke, who was surely the greatest scientific student the feline Fancy ever possessed. To draw him into a corner at one of the shows for a chat was an instructive and pleasant experience, and mention should also be made of the late Mrs. Carew Cox, who at one period was alone in her efforts to keep the breed in existence. To the late Major Sydney Woodiwiss, who founded the Abyssinian Cat Club in 1929, credit is due concerning the high standard of the breed in England of recent years. The war interfered with the Club's activities, and has sadly depleted the breeding stock of its members, which may mean that some years will elapse before really first-class specimens will again be available to the public. The demand is keen and consistent, and when conditions are satisfactory, efforts will be made to revive the activities of the Abyssinian Cat Club. Owners of good stock must be considered



ABYSSINIAN
CH. CROHAM ISANA

fortunate, and should be given every encouragement to keep up the standard demanded by the Club.

The following standard is laid down by the Abyssinian Cat Club :

Colour and Type : Ruddy brown, ticked with black or dark brown, double or treble ticking, i.e. two or three bands of colour on each hair, preferable to single ticking ; no bars or other markings except that a dark spine line will not militate against an otherwise good specimen. Inside of forelegs and belly should be a tint to harmonize well with the main colour, the preference being given to orange brown ; no white markings permissible.

Head and Ears : Head long and pointed, ears sharp, comparatively large and broad at base.

Eyes : Large, bright and expressive. Colour : green, yellow or hazel.

Tail : Fairly long and tapering.

Feet : Small, pads black ; this colour also extending up the back of hind legs.

Coat : Short, fine and close.

Size : Never large or coarse.

SCALE OF POINTS

Body Colour and Type	40
Head and Ears	15
Eyes	10
Tail	5
Feet and Legs	5
Coat	10
Size	5
Condition	10
	100

Accidents

Wherever livestock is kept, from time to time one of them will meet with an accident. In this book many of the accidents which are likely to happen to cats have been mentioned and practical advice given for dealing with them. It is, however, quite impossible to foresee all the mischances of a cat's life. Prompt action and calmness are great assets in dealing with accidents, and provided that one has had the forethought to prepare a suitable medicine chest, the situation can usually be met with confidence.

Accommodation

If only one or two cats are kept the question of accommodation usually causes little difficulty, for the animals will be kept in the house. This can be a most satisfactory arrangement both for cat and owner, but it is a mistake not to provide sleeping quarters which the cat recognizes as being its own private spot. A box or basket raised off the ground and thus away from floor draughts should be provided for every animal kept in this way. Once the cat has been trained to use this and has become accustomed to it, that is where it will go when it wants to rest. Cats which have been allowed to sleep anywhere where they think they will be comfortable are often very difficult to deal with during illness. The places they choose for themselves are often quite unsuitable when the cat is a patient, yet they are so much creatures of habit that they resent any change which the owner considers advisable at such times. Train a kitten from an early age to go to its own bed. If you do not the time will come when you will regret not having taken the trouble.

Boxes are preferable to baskets, and an ordinary wooden box which has part of the lid left at the bottom to prevent any possibility of draught can make a very comfortable bed. Naturally some sort of bedding will be needed, and although in normal times various materials are advertised as being useful for this purpose, most breeders still favour a piece of blanket. If the owner objects to the unsightliness of a plain box, a little ingenuity and artistry can easily turn it into something which is not unpleasing to the eye. The illustration shows a simple but effective type of sleeping box.

Acidity of Queen's Milk

Some queens seem to be quite incapable of rearing a litter. For a time the family seems to thrive, and then within a few days all are dead. This unhappy event often occurs when the kittens are as much as a month old and are running about outside the nest-box. The cause of this premature death is frequently due to the fact that the queen's milk is too acid and causes constipation. This in turn produces fermentation, and one soon notices that the kitten is swollen or " pot bellied ". This subject will be dealt with more fully under the heading of " Pot Belly ". For the moment attention will be focused upon the queen and the measures that can be adopted to prevent her milk from developing high acidity, or if the ill is already present, how best to cure it before damage to the litter is final.

It is always wise to assume that the mother's milk will be acid, for in such matters prevention is far better than cure. The milk flow usually starts several days before the kittens are born, and that is the latest time to take action. Normally the queen will receive two drinks of milk each day, and to each saucerful add one 2-gr. tablet of citrate of soda. Should the queen not be taking milk as part of her diet, this can be added to the drinking water. In whatever medium the citrate of soda is given, it is a good plan to dissolve the tablet in a small quantity of water before mixing it with the liquid. Many queens which have had trouble with acid milk with previous litters have been cured by this simple treatment.

Some queens, however, always give trouble in this respect when milk forms part of the diet. This possibility can usually be recognized from the fact that milk, even at normal times, produces digestive disturbances. The remedy is perfectly clear.

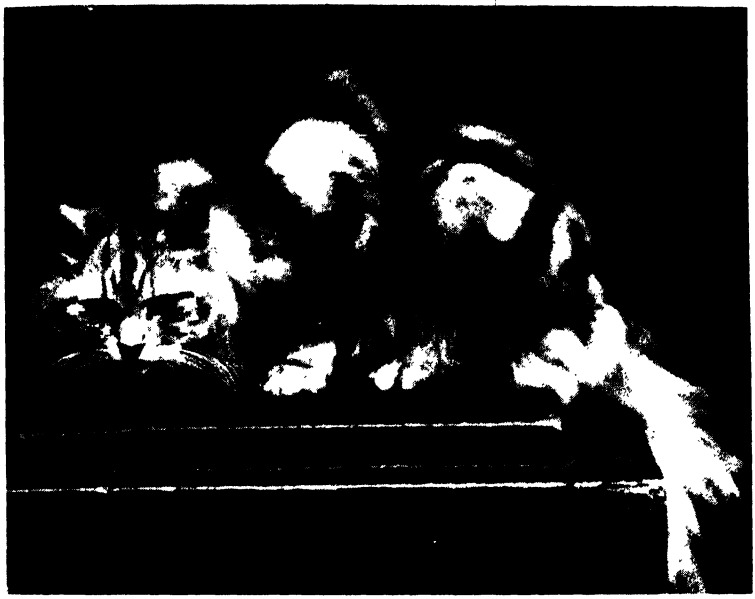
All cats are rather subject to constipation, which itself helps to cause acidity, and it is therefore essential to see that the bowels are functioning normally during the nursing period.

It is most distressing to lose a litter which has developed satisfactorily for a month, but the misfortune can usually be prevented by judicious feeding and the application of simple remedies.

Administering Medicine

Sooner or later one is bound to be faced with the problem of giving medicine to a cat, and to the inexperienced this is rather a formidable task. With practice, however, one soon gains confidence and achieves success with the minimum of distress to the cat. Perhaps that is the most important point, namely, that medicine should be given without frightening the patient. If you have to struggle with the animal before the medicine is swallowed, it is better for the time being to leave the task to an expert and watch carefully how he works.

The easiest form of medicine to give is that in tablet form, or which is enclosed in a capsule. Carefully but firmly open the cat's mouth with the left hand, place the tablet on the back of the tongue, and then quite calmly push the tablet over the back with the first finger of the right hand. After a few attempts one can accomplish this with a minimum of fuss and a maximum of speed with the result that the patient is too surprised to offer any resistance. This, however, does not end the operation, for some cats are very clever in holding a tablet in the throat until freed and then spitting it out. Hold the mouth closed for a few seconds and at the same time stroke the throat gently. This causes the



IS IT MEDICINE?

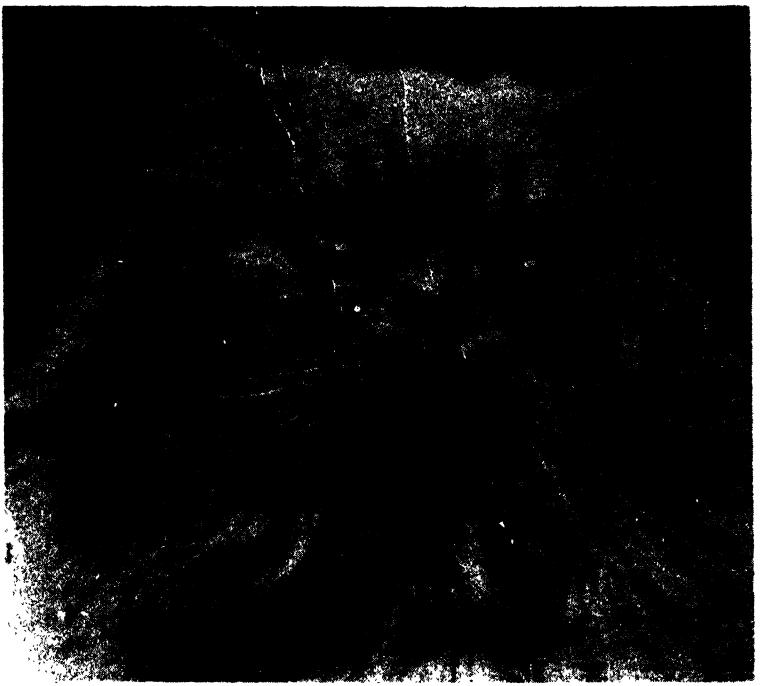
cat to swallow involuntarily and the medicine has passed down the gullet.

With liquid medicines one must exercise even greater care, for it is quite possible to set up a mechanical pneumonia if carelessness permits some of the liquid to " go the wrong way " and reach the lungs. The great art in giving liquid medicine consists in giving it very slowly. A small spoon inserted in the side of the mouth usually allows one to give the dose without much difficulty. A dropper kept well away from the teeth which might break it is even better. If the cat has confidence in the person who is dealing with it, half the battle is won. Some breeders are expert at giving liquid medicine by using a hypodermic syringe which is placed into the side of the mouth in the same way as when a spoon is used.

Confidence on the part of the operator is the main factor in successful administration of medicine, and this can only be achieved when the method of treatment is fully understood before it is attempted. (*See Capsules.*)

Affixes and Prefixes

A cat breeder may apply to the Governing Council of the Cat Fancy for the sole right to use a certain prefix when registering



CREAM
CH. SHERRY OF HANLEY

cats bred by him. The exclusive right to use such a prefix may be extremely valuable because if the cats bred by this breeder achieve success on the show bench, and such successes prove to be consistent, the word used as a prefix may be regarded as the hall-mark of a good cat. For many years the prefix Langherne was used for all the well-known Chinchillas bred in a certain cattery. Champion Langherne Felix and Champion Langherne Treasure were only two of the many famous cats which bore this prefix in their pedigree. Naturally one has to pay for the privilege, and it is possible either to pay an initial fee of half a guinea, with an annual payment of one shilling for the retaining of this privilege ; or a first and final payment of a guinea will give one this right in perpetuity.

Until a few years ago affixes were also permitted, but now no new affixes are registered although those granted in earlier years may still be used. Such famous affixes as " Of Allington ", and cats such as Champion Rodney of Allington (a cat that is still living), are known all over the world where pedigree cats are bred.

Anyone intending to take up seriously the breeding of cats would be well advised to make application to the Secretary of the Governing Council of the Cat Fancy for the conditions on which such an exclusive title can be granted.

Age for Breeding (Females)

The novice is often doubtful as to the correct age at which a female cat should be allowed to breed. Often the reason for this query is that a young female will call when she is quite small, sometimes as early as six months.

Most females are capable of producing kittens when they are seven to eight months old, but it would be most unwise to take advantage of this obvious precocity. It should be the aim of the breeder to improve his stock, and to make sure that as the years go by his kittens are bigger and stronger than their ancestors. Breeding from animals that are not physically mature will have just the opposite effect, and in process of time the stock will lose in size and stamina.

It may be argued that the ordinary house cat mates as soon as it is sexually ready and frequently produces a healthy litter by the time it is eight months old. House cats which breed thus early are usually small, one result of early breeding for generations. On the other hand, too, the primitive principle of the survival of the fittest is applicable, and those in the litter which are not robust die. With pedigree cats unfortunately it is a common practice to make every endeavour to rear even the weakest.

By the time a female is twelve months old she is usually fit for breeding, for, although she has not attained to her full growth, the rate of that growth is much slower in the second year. These remarks apply only to the long-haired varieties, as Siamese cats mature physically several months earlier. It is a good rule never to mate a Siamese until she is nine months, and Persians until they are quite a year.

Occasionally one meets a young queen who calls so frequently when she is not old enough for breeding that holding her back produces a form of sexual hysteria. Remembering such exceptional cases, some breeders advocate mating when the young queen is calling for the third time, whatever her age.

Occasionally one finds breeders who endeavour to hold back a young queen too long before allowing her to be mated. The idea is that if a female is not mated until she is eighteen months old she will by that time have completed her growth. Practice often shows, however, that this policy is not wise, for some queens

apparently healthy and normal are indifferent breeders if not mated until well on in their second year.

It is the wise breeder who strikes the balance between " too early " and " too late ".

Albucid Ointment (Eye Affections)

This substance is extremely valuable in treating inflammation of the eye or of the ducts running from the eye into the nose. " Running " eyes are a common complaint with cats, and in some cases the inflamed tissues can be clearly seen. If albucid ointment is smeared on the inside of the lower lid, and both lids are then held together for a short time, a thin film of the ointment rapidly spreads over the ball of the eye. The cure effected by this method is often remarkable for its rapidity. Even when with some cats this eye condition has apparently become chronic, a complete cure often results from the use of the ointment. The same treatment may also be used for young kittens which sometimes, shortly after the eyes are open, develop a mild form of infectious conjunctivitis.

At the worst this sodium salt of sulphacetamide can do no harm, for it is absolutely non-irritant.

It can be purchased in the form of ointment or drops, and the breeder must choose the form which he finds easier to administer. It would be a wise plan always to keep a small supply in readiness.

Anæmia

Anæmia in cats is fortunately not common, but when it does occur considerable patience is needed to effect a cure.

It is a mistake to regard anæmia as a disease, for it is merely a symptom. While treating this symptom by medicine and food calculated to improve the blood supply, one should at the same time seek for the hidden causes of the trouble.

A cat that is anæmic is usually listless and often lacking in appetite. It is when one is trying to find a cause for this state of listlessness that one's attention is first attracted to the paleness of the cat's gums. Further examination reveals that all the mucous membranes are lacking the healthy colour which denotes a sound blood supply. The diagnosis is thus anæmia.

Anæmia can be caused by too frequent litters of kittens, or by a particularly large litter when the queen has been called upon to provide a greater supply of milk than her physical reserves will allow. The moral here is perfectly obvious. No queen should be expected to rear more than two litters a year, and it is asking for trouble with all but the strongest queens to permit them to



EYE TROUBLES

suckle more than six kittens. Debility produced by carelessness in breeding practices will make future breeding more difficult. It must also be emphasized in this connection that all kittens should be completely weaned when they are eight weeks old. Many queens can still feed kittens when they are ten weeks, but to allow this is to court anæmia.

Another possible cause for the complaint is bad infestation by fleas or lice. Blood sucking by these insects over a long period cannot fail to produce anæmia. Surely this is a cause which can easily be prevented, yet there are cat owners who do not see that their stock is reasonably free from external parasites.

Sunshine is an essential for cat health, and cats which are kept in artificial light, or where there is no direct light, cannot fail to become anæmic. Exercise in daylight must be taken if the blood stream is to be adequate in quantity and satisfactory in quality. Obvious though this fact may seem, many cats are kept under conditions which in no way fulfil these elementary demands.

If the trouble is simple in origin the remedies are equally simple. A small amount of raw liver once a week is a great help, and if this is supplemented by a course of Parrish's Chemical Food with a nourishing diet, improvement should soon be noticed.

Ferro-Malt is another useful substance, and a saltspoonful of this dissolved in warm milk and given once a day for several weeks should soon produce an obvious effect.

Medicines certainly have their uses, but a natural healthy life with a sane diet is both the best preventive and the safest cure.

If, after a few weeks' treatment, no improvement is seen, the cause of the trouble is probably far more serious than those suggested. In the best interests of the cat the owner should seek the help of a veterinary surgeon.

Anæsthetics

Anæsthetics can only receive passing reference in a work of this scope, for they fall definitely within the province of the veterinary surgeon.

There is, however, perhaps one aspect of anæsthesia that may concern the layman. When a queen is in kitten, the giving of an anæsthetic is sometimes necessary for the delivery of the kittens. The easiest anæsthetic to give is one of the barbiturates such as nembutal, but the result of its use will be dead kittens. On the other hand, most cats are very alarmed by the use of ether and try to resist its effects, with the possibility of an overdose even with the most skilful vet. It is a risk which may have to be taken, but for the understanding breeder there is also a moral issue involved as to the choice of anæsthetic.

Appetite

Most healthy animals display an appetite which corresponds with their physical fitness and which is also in direct proportion with the amount of physical exercise they are taking. Cats, however,

are not straightforward subjects in the matter of appetite, for they show a definite independence of spirit as far as feeding is concerned. A cat eats what it likes, and it must be almost starving before it is prepared to eat what it does not like.

Naturally one likes to see the healthy appetite of one's stock, and to retain this sound symptom of fitness it is necessary to display common sense in feeding. Variety is a great help to appetite, for even the appearance of a titbit, if long continued, fails to excite the gastric juices into activity. A cat that can always see food rarely shows any keen desire to eat it.

[Lack of Appetite]

When a cat shows no desire for a meal there are two possibilities to consider. Either the animal has obtained for itself an illicit meal or else it is unwell. It may be difficult at first to find which of these causes fits the case, but if illness is the cause there are usually other symptoms which are apparent.

Cats, like humans, are inclined at times to eat too well rather than wisely, and the missing of a meal need cause no alarm. Often it is the natural wisdom of the animal which prevents it from eating when it does not feel hungry. Humans in this respect are far less wise.

When loss of appetite can definitely be attributed to some physical disorder one must naturally seek to find a cause.

Digestive trouble of any kind may cause lack of appetite, and if that is realized as being the root of the trouble, a mild aperient will soon work wonders.

When the cat has a temperature its appetite invariably disappears, and for that reason, when food is refused, it is an excellent plan to take the temperature.

Some cats suffer from nasal catarrh and such animals are difficult to feed. It is not the sight of food that appeals to them but the smell, and an animal with nasal catarrh has lost much of its sense of smell. One must then tempt the appetite with foods which are on the "high side", at the same time adopting remedies to bring back that sense which has become dulled. It is a good plan carefully to clean the nostrils, and then to rub a small amount of the food on the cat's nose. She will certainly lick this, and the taste may quickly restore the desire to eat.

After a serious illness many cats are very difficult to feed. Lack of exercise, and probably a high temperature, have left the cat listless and uninterested. For a time it may be necessary to feed the cat with some highly concentrated food such as Brand's Essence, but this is perhaps the only condition in which forcible

feeding can be recommended. As soon as strength starts to return most cats can be tempted with small pieces of raw meat.

Cats rarely display a depraved appetite as often happens with dogs, but, if a cat ever shows signs of wanting to eat the unusual, it may be a sign of deficiencies in the diet. A well-balanced diet will promote a healthy appetite with no signs of depravity. (*See Balanced Diet.*)

Artificial Heat

Some breeders are strong advocates of the use of artificial heat, particularly in outside catteries, while others equally firmly deny the necessity. It is very difficult to generalize on a matter of this kind, but one's practice must be governed very largely by the conditions to which the cats have grown accustomed. When purchasing kittens which have been reared with artificial heat,



AN ORIENTAL GENTLEMAN

it would be the height of folly immediately to submit them to the Spartan conditions of an unheated outside cattery.

During the war, however, it has been difficult, if not illegal, to provide special heating for catteries, and many breeders who reared and maintained their cats with heat during the winter months in pre-war days have been compelled to adopt other methods. In most cases this changed treatment has not been followed by dire consequences.

The fact is that cats, particularly the long-haired varieties, are adequately protected by nature against cold, and if they never experience artificial heat rarely seem to show a need for it. A kitten which is born in early spring is well grown by winter, and, if not coddled in any way, seems unaffected by the seasonal cold. An abundant supply of good food, and opportunities for exercise, are the best means of producing a sound circulation in a cat, and that in itself is the most natural method of keeping warm. Some long-haired cats will even enjoy a run in the snow, and provided that they have always been allowed to lead a natural life, and the coat is dried when they come into the house, they seem to suffer no harm. The trouble with many cats which appear to be delicate is that they have never been allowed to develop stamina.

The case of freshly imported cats, when these animals come from warm climates, is somewhat different. When Siamese were first imported into this country they were very susceptible to chills, and during the period of acclimatization heat was a necessity. In fact, few, if any, would have survived an English winter without such artificial heat. The tradition grew, and finally the statement was made that all Siamese required heat in the winter ; a fact, however, which has been disproved by the restrictions of the past few years. All cats like warmth, and there is no reason why they should not be indulged from time to time, provided that they are also allowed to become used to quite wide variations in temperature. It is sane to regard heat as a luxury, but never as a necessity except in very particular circumstances.

For kittens born in winter artificial heat is a necessity because kittens need food and warmth only for the first few weeks of their lives. The warmth of the mother's body is not sufficient in winter to satisfy this need, and consequently the temperature of the room must be raised by artificial means. It must be borne in mind, however, that winter kittens should be considered as an unfortunate accident. Winter is not the time for breeding and should not be practised, for kittens born at this time of year cannot look forward to a normal upbringing. If one makes it a rule to avoid litters from the end of October to the end of

February, more satisfactory kittens will be produced, and there will be little need for artificial heating for this purpose.

A sick cat always needs artificial heat, and the hope of recovery is greatly increased by its use. The reference here is not to minor ills when a cat may well be able to take its normal exercise, but rather to those more serious illnesses in which the animal does not eat and merely lies in its bed. Body heat is obtained from the food that is eaten, and therefore the need for artificial heat is quite clear in the case of a cat which has not eaten for several days. To meet this need probably the best source of heat for a sick cat is a hot-water bottle. This may entail a little more labour than other methods, but it is rarely that the bottle need be renewed more than three or four times in the twenty-four hours. The best type of bottle to use is one of the rubber variety, and this must be well protected by blankets so that the cat does not come into actual contact with the rubber. This method of providing heat may be also safely used for a litter of young kittens.

If you feel that your outdoor catteries must be provided with some form of artificial heating for occasional use, there is no doubt but that electricity is the best source of supply. The installation may be somewhat expensive, but tubular heaters will provide a steady warmth well distributed over the room. The tubes must be placed where it will be impossible for the cats to lie against them, which they most certainly will do if it is at all possible. Failing this method one may provide a small electric fire of one element. The cost of running such a fire is not heavy, and maintenance costs are negligible. Here again the fire must be placed well out of reach of the animals. Probably it will have to be placed near the ground, but, in that case, a strong metal guard should be provided which will not allow the animals to approach nearer than 18 inches.

A much less satisfactory method of providing heat is by the use of oil stoves. These certainly cannot be recommended, as sooner or later some trouble is bound to occur. Either the lamp will be trimmed badly and one will return to find the cats and the house smothered with soot, or the lamp will go out at a time when the heat is most needed. Oil heating always entails considerable labour, and with this method there is far greater risk of fire. Some breeders have used oil heaters of the radiator type which are used in small greenhouses, but whatever type one uses it must be impossible for the cat to sit on top of the stove. Such stoves must also be sufficiently heavy so that they cannot be knocked over by the animals. Oil heating has too many disadvantages attached to its use for anyone really to be in favour of it.

As was said earlier, it is by far the wisest plan to accustom cats to cold. A sheltered bed with good, dry bedding is sufficient to keep most cats comfortable, always provided that they have not been treated as hot-house plants from the day of their birth.



BLUE
BLESSED MISCHIEF OF HENLEY

Artificial Insemination

Artificial insemination has already been practised with considerable success in the breeding of some animals, but up to the present there have been no reports of experiments along these lines with cats. It is to be hoped, however, that the combination of a breeder and a veterinary surgeon will before long attempt this and then give the Fancy the results of their experiments.

With the breeding of all animals there is a very strong argument in certain circumstances for the use of this method of fertilizing the female in an attempt to improve the various breeds. Whether or not it should become the usual method of mating is entirely another matter.

Some sires possess the ability of passing on to their offspring certain very desirable characteristics, although it is quite possible that these males may show in their appearance little evidence that they themselves possess such qualities. On the other hand, a male of outstanding quality may be quite incapable of passing on to the kittens he sires his own excellence. Thus it would be possible to find a stud who is the sire of outstanding kittens

which win on the show bench, although he himself may never win a prize. If a stud of this stamp produces kittens of great merit when he is mated to a number of queens, then it must be obvious that he should be used as much as possible for the improvement of the breed. By making use of artificial insemination this would be simple, for nature is extremely prodigal in her attempts to ensure that mating is likely to lead to fertilization. The number of sperms ejected at each copulation is in millions, while the ova of the female to be fertilized can probably be numbered in tens. It might easily be possible to make one " service " suffice for the mating of perhaps a dozen queens.

Furthermore, this method of fertilizing the ova might be tried with queens which, after a number of matings with different studs, seem to be sterile. Often the secretions of the vagina are so strongly acid that the sperms are immobilized and destroyed before they reach the uterus. By using the artificial method and injecting the sperms into the uterus, pregnancy might quite likely follow although natural matings had proved unfruitful.

It may be argued that a reduction of the number of males in use would lead to " inbreeding " with unhappy results. This is only a danger if one does not understand " inbreeding ". Scientifically inbreeding need have no unfortunate consequences, and the male which was fairly closely related to a female with whom he produced unsatisfactory kittens would obviously be an animal to discard. One must understand quite clearly that a close relationship does not itself imply unsatisfactory offspring. Far more important is it for the breeder to have sufficient understanding of genetics to be able to assess the possibilities of a particular mating, and to be able to interpret the results when he sees the young.

The foregoing is, of course, just " theory " at the present time, but as our knowledge of genetics in relation to the cat increases, and further work is carried out on the subject of artificial insemination, this " theory " may perhaps become useful practice.

Asthma

Old cats occasionally develop symptoms which are very similar to those of asthma in human beings. As, however, it seems almost essentially a characteristic of old age and is never met with in young cats, it is doubtful whether this is true asthma. As usually it is the fat animals that are affected, the difficulty in breathing may be caused by faulty action of the heart.

In most cases there is a hard cough accompanied by breathing which is both rapid and also abnormally deep. Such attacks

seem to be dependent upon temperature and also on marked changes in atmospheric conditions. A rapid change from a cold temperature to one of considerable heat, in a room where there is little ventilation, is liable to bring on a distressing attack. In such cases there may be extreme exhaustion, and if attacks are frequent, the heart becomes an additional source of anxiety.

Animals that are susceptible to this complaint should be kept in an even temperature as far as possible. There must always be an abundance of fresh air. A hot room with poor ventilation would only aggravate the trouble.

The diet should be light and nourishing, and it is a good plan to give small meals more frequently than one would provide for a normal cat. An overloaded stomach must be avoided, for when this organ is distended, breathing is made even more difficult.

Few medicines are of any permanent value, but gentle laxatives should be given quite frequently to ensure a daily movement of the bowels.

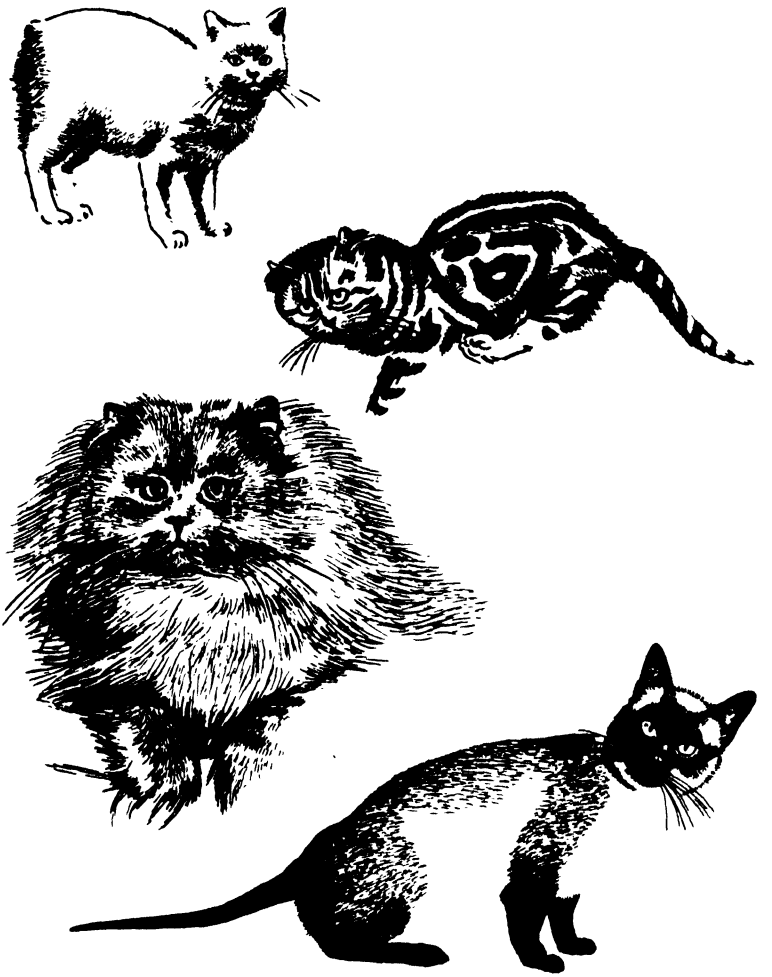
Atavism

Atavism is the resemblance of an individual to its remote ancestors rather than to its immediate parents. This fact is of considerable significance to the cat breeder when choosing the sire for a particular female. The sire and dam of a particular kitten might well be almost perfect, and yet the kitten itself might show qualities apparent in neither parent. Thus it is of the greatest value to consider very carefully the pedigree of individuals which are to be used for breeding purposes.

Each individual shows certain qualities and characteristics to the eye, but what one cannot see is the hidden inheritance acquired from its ancestors. Perhaps it will be easier to understand the point if an illustration is given.

Occasionally a Siamese kitten is born with a white toe. This is a definite fault and would be a severe handicap on the show bench. In all other qualities the cat may be well up to show standard. Eventually the cat is mated and the resulting litter may show no signs of white toes. This may go on for several generations, and it might well be the fifth generation before white toes were again seen. What is certain is that what is bred into a strain, whether good or bad, will appear again in some of the descendants of the original pair.

Bearing in mind the certainty that atavism is a fact, it is only wise to discard for breeding purposes all animals that possess glaring faults. If all breeders conscientiously followed this



CHARACTERISTIC TYPES

advice there would be little need for that careful study of pedigrees which is now essential for successful breeding.

It must be stated, however, that names on a pedigree are of little value unless at the same time one has a knowledge of the good and bad qualities of the animals named.

Autumn Litters

There can really be no argument with the statement that the easiest litters to rear are those which are born in spring and early summer. Nevertheless, if one were to abandon all thought of litters except those to arrive at these times, it might well be that a queen would only have one litter a year, and sometimes, if she had a false pregnancy or missed several times when sent to the stud—a not unusual happening—none at all.

Thus it is sometimes unavoidable that a litter will have to be arranged to arrive in late August or early September. Kittens born at this time often thrive and grow well, but much depends upon the skill of the breeder. It is, however, unwise to plan for litters later than the first week in September unless one realizes fully that special treatment will be necessary.

Late autumn litters seem to make very satisfactory progress for the first five or six weeks, although one may notice even during this period that they do not gain in weight as rapidly as their brothers and sisters which were born earlier. Such kittens frequently show plenty of energy at times, but they seem to tire more quickly than those born in spring. Often, too, when they are about six to seven weeks old, when the process of weaning has started, their appetites are uncertain, and the size of the meal they take is less than one expects for growing kittens. There is no natural symptom of illness, though they seem somewhat listless, and their bursts of energy are interspersed with long periods of inactivity. It is at this stage that one begins seriously to wonder what is wrong.

The fact of the matter is that they have not been reared in such a way as to take into consideration the time of year, and the effect that this has upon the mother, and through her upon the kittens.

In spring and summer, even when she is nursing her family, the mother will spend considerable periods outdoors in full daylight and often in bright sunshine. This allows her to produce in her own body accumulations of Vitamin D which she passes on to her kittens with her milk. In late autumn and winter there is thus a comparative deficiency of this vitamin, and as the weeks pass and the kittens increase in size, this lack is shown by listlessness and a general appearance of unthriftiness. The kittens cannot at this time of year be taken out of doors themselves because of the temperature. The remedy, of course, is at hand if one will only use it. All kittens born late in the year should be given one drop of Halibut Liver Oil each day when they are a month old ; at five weeks this should be increased to two drops, and a further drop added at the end of the next week.

This dose of three drops a day should be continued until the kittens are allowed out of doors early in the spring. This may be regarded as the maximum preventive dose, but in cases where deficiency exists a daily maximum of six drops may be used if the vet. has been consulted.

An assured supply of Vitamin B is also essential for these kittens. This vitamin actually consists of various substances which are of the utmost importance for correct metabolism. If B1 is deficient one can expect poor growth and unsatisfactory digestion. Lack of appetite will certainly soon be another symptom of the same deficiency.

There are a number of substances containing adequate quantities of these essentials, but unfortunately the cat will not always eat them. Synthetic products also exist, and are a simple means of dealing with the problem. Benerva Compound, manufactured by Roche Products, Ltd., has been found very useful in practice.

B

Bad Doers

Wherever a number of cats are kept, there will be found at some time or another a "bad doer", and much understanding and knowledge may be needed before the underlying cause can be found. Such an animal is without vitality, and whatever the state of its appetite, it seems incapable of putting on flesh and is frequently emaciated. Age seems to have little to do with this condition apart from the fact that old cats often become thin and listless as their ability to assimilate food gradually diminishes.

As a first step towards improving the condition the animal should be examined for anæmia, for this perhaps more than any other cause is likely to be the root of the trouble. The appearance of the gums is often conclusive on this point. If anæmia is present this must be remedied before there can be any possibility of the return to a normal state of health and fitness.

Digestive troubles in cats of all ages may easily produce a state of undernourishment shown by emaciation. An undernourished cat easily becomes tired. It is not only the quantity of food that is eaten, but the proportion which is digested, which decides physical fitness. It is obvious, of course, that the food provided must be adequate in both quantity and quality if normal health is to be maintained. Where, however, a number of cats are kept, and only one shows signs of being a bad doer, unsatisfactory methods of feeding can be ruled out. One cannot, nevertheless, neglect the possibility that this one particular animal is unable to assimilate its food satisfactorily. The cure may call for a special diet for this one animal or the use of medicines which will remedy its digestive inadequacies.

Diseases such as tuberculosis and cancer would certainly produce these symptoms, and no treatment would be likely to bring about any improvement. There are, in fact, many diseases which would undoubtedly cause a marked state of debility, but to recognize them would not be within the power of most breeders.

Parasites, whether internal or external, such as worms, fleas or lice, are liable to undermine the constitution of the cat, and in

course of time produce marked debility. Once such parasites are removed, recovery should be both quick and permanent.

From time to time all cats have a period in which normal vigour seems to be impaired, but in such cases the provision of a tonic will soon bring about improvement. If, however, no such benefit follows such treatment, deeper and perhaps more serious underlying causes must be sought, and the advice of a good vet. obtained.

When, in a litter of young kittens, one is found to be a " bad doer ", it is very doubtful whether any attempt should be made to restore health unless the cause of the trouble is easily recognized and complete cure is known to be possible. Weakly kittens can often be reared to an apparently healthy adult state, but one must consider very carefully whether such care and attention which these kittens need is in the best interests of the breed. With future breeding stock no chances should be taken.

Bad Temper

Bad temper in cats is usually the result of bad training, and the blame belongs much more to the breeder than to the animal which displays such a temperament. Unfortunately far too few owners of cats ever trouble to try to understand the minds of their animals, with the result that they cannot see things from the cat's point of view.

No kitten is born bad tempered, and all cats can be so reared that they get on well with their own kind and human beings as well.

A kitten is purchased and perhaps for twelve months receives the undivided attention and affection of its owner until such time as another kitten is purchased and brought to the house. Quite often it is the new kitten that now receives the lion's share of attention, and it is not unnatural that the first arrival resents this intrusion and shows its resentment in no uncertain manner. It would have been quite simple to introduce the new kitten in such a way that its arrival was welcomed, had the owner exercised sufficient intelligence in the matter. Strange cats should be introduced to each other, and so important is this little courtesy that a special section of this book has been devoted to it.

Often bad temper is merely self-defence. A kitten has been roughly treated, and as it grows up it realizes that tooth and claw are capable of procuring for it at least freedom from serious interference. Cats should never receive physical punishment, for that is something they cannot understand. A cat that is hurt physically becomes one that is afraid of similar experiences, and

it is often fear rather than bad temper which causes an animal to feel that it must defend itself with the only weapons it has at its disposal.

Few kittens like being groomed, although that should obviously form part of the daily routine of any well-cared-for cat. The grooming must be done, and done without the cat displaying bad temper. This is where the sound common sense of the breeder can be shown, but frequently that is not the case. Kittens must be dealt with firmly but gently. It is quite hopeless to hold a kitten in a vice-like grip until the task of grooming is complete. By that time usually both owner and animal are exhausted. The toilet must be accomplished a little at a time, and it is really surprising how, if the matter is dealt with in a reasonable manner, even grown cats look forward to the daily grooming.

Cats are not all alike, however, and the owner who has not time to consider them as individuals ought not to keep them.

It must be remembered that a bad-tempered mother can make a bad-tempered and unmanageable kitten. Her own shortness of temper, with its little acts of spitefulness, evoke a similar response in the offspring.

A sane attitude by the breeder will certainly do much to ensure that her stock is pleasant natured and capable of mixing well when it goes to new homes.

Balanced Diet

A balanced diet is one which contains all those foods necessary for the normal functioning of the body, and at the same time includes them in quantities which supply bodily needs without producing a surplus of fat in the animal.

A kitten not only needs food for the production of energy and body heat, but at the same time requires a surplus to maintain a steady growth of body. With animals which are full grown, the food has only to make up the losses due to the expenditure of energy and the general process of living. Thus the quantities of body-building foods may be considerably reduced in comparison with those fed to the growing kitten. Studs, on the other hand, although fully grown, make big demands upon their strength, and consequently need a more generous diet to compensate for this.

Finally, there is a third group of foods known as the protective foods, and this group is certainly just as important as the other two. In fact, physical stability can only be maintained if all three are regarded as essentials. A piece of wood that has two dimensions, with a third which is almost non-existent, can be

balanced on this third's dimension, but its stability is most precarious. If, however, it is given a third dimension comparable to the other two, real stability can be achieved. Thus it is with feeding.

Classification of Foods

Foods for the Production of Energy and Body Heat

These are the fats and carbohydrates.

It is very doubtful whether fat is a necessity for cats, and for some of them it proves most unsatisfactory. It is quite probable, however, that it is the form of the fat which decides suitability. Some cats enjoy a stolen meal of butter, but are seriously upset when fat mutton is fed to them.

Under the heading of carbohydrates come the starches and the sugars, which are supplied by such foods as oatmeal, biscuit foods and potato, all of which may be used to advantage in the cat's dietary. Whereas man has accustomed himself to a diet containing at least 50 per cent of carbohydrates, such a proportion would be more than a cat would require for normal health. Where the diet consists of more than one-third of carbohydrates, there is a definite possibility that the animal will become over-fat.

Foods for Repairing and Building the Body

These are the proteins which should form the largest part of the cat's diet. They are contained in milk, eggs, meat and fish, all of which are used in some form or other for most cats, but it is fish and meat which contain the highest percentage of protein, and this percentage is naturally higher when the foods have been cooked. In cooking much of their natural water is driven off. One must never lose sight of the fact that a cat is a carnivorous animal, and in its wild state was almost exclusively a meat eater. Even here, however, one must remember that in this wild state the animal ate the whole carcase of animals which were not themselves carnivorous. In this way it no doubt obtained some of those essentials of diet which could not be obtained if raw, lean meat alone were eaten. This remark is necessary as the argument is sometimes put forward that if a cat were fed a diet made up entirely of raw, lean meat, all its needs would be supplied. Such a statement is both misleading and dangerous.

The Protective Foods

These foods contain the mineral salts and vitamins which are now recognized as being of the utmost importance. The actual quantities of individual salts and vitamins required are exceed-

ingly small. The cat's needs in this respect can be satisfied when milk, green vegetables, carrots and fish are used as part of the regular diet. There is no need to deal here more fully with this subject, as there is a separate section in this book on vitamins and mineral deficiency.

Baldness

It is extremely rare for a cat to become almost bald, but not at all uncommon to come across an animal with a number of bare patches.

It has to be remembered that the condition of the hair and the general appearance of the coat are both indications of health. Some animals have a coat which is extremely thin and at the same time staring, and this is a definite indication of a bad doer. Sometimes it is by no means difficult to find the cause for this condition and thus to be able to apply the remedy.

A female which has recently reared a large litter has probably expended so much of her physical resources that she has no longer that reserve left which is necessary for satisfactory hair growth. Freedom from maternal cares for an extended period will soon put the matter right.

It is quite normal for cats to moult twice a year, but one sometimes notices cases where it is difficult to distinguish between the end of one moult and the beginning of the next. It has been suggested that this is due to the fact that one of the parents was not in firm coat at the time of mating. This is not, however, an explanation that carries any real conviction. Some cats seem by nature to be almost continuous moulters, and there is little that one can do about it. Medicines seem to have little effect, and provided the animal gets good food and adequate exercise, one has carried out two of the main essentials for good health and a sound coat.

Bald patches, on the other hand, are usually a sign of some specific trouble which requires particular treatment.

Bare patches in front and behind the ears are frequently an indication of canker, and inspection of the ear will usually confirm this diagnosis. The irritation produced by the ear condition has caused the animal to scratch, and bald patches are the result of hair being torn out by the animal's sharp claws. This state, however, can only occur when there has been considerable neglect and carelessness on the part of the owner. Constant scratching in the neighbourhood of the ear should have suggested an immediate inspection.

Mange is another cause of bare patches, but with this disease

the baldness is not confined to the region of the ears but spreads to other parts of the body. Actually there are two different types of mange which will be dealt with in a later section of this book.

Eczema and ringworm may both produce similar bald areas, and these require early treatment if the cat is not to become unsightly and if a permanent cure is to be speedy.

In all cases of skin trouble correct diagnosis is extremely important, and unless the owner can readily recognize the various types of trouble it is far better to obtain the help of a vet. as soon as the first symptoms of an unhealthy skin condition appear. (*See Mange, Eczema, Ringworm.*)

Bandaging

To put a bandage on a cat is quite simple, but how long the bandage will remain in position is another matter entirely, for some cats will bite at the bandage until they remove it. In such cases extra trouble has to be taken.

When applying a dressing to the foot or leg, this should first be covered with a pad of cotton wool and then securely bound with a roller bandage. An ordinary spiral winding of the bandage is satisfactory, and the knot must be tied in the most inaccessible position. This is in the rear of the leg. Although a spiral is satisfactory when the part to be bound is the same thickness all the way up, a figure-of-eight must be used when there is variation in thickness such as one finds in the thigh of the hind legs. Either method of applying the roller bandage may be easily learned with a little practice.

If the cat is likely to try to remove the bandage, it is a good plan to bind each end with adhesive plaster. Such plaster can never be used directly on to the coat, as the long fur of the cat makes plaster difficult to apply and much more difficult to remove.

The many-tailed bandage is most useful when dealing with head, back or chest. It is the type of bandage which can be made at need out of cotton sheeting. The many tails allow the bandage to be tied in a number of places, and this will prevent it from slipping.

When used on the head, holes must be cut for the ears. When the ears are brought through these holes movement of the bandage is largely prevented.

When bandaging the chest, holes should be cut for both fore and back legs, as this will prevent slipping in either direction. If only the front legs are included it is probable that the bandage will gradually work forward. This is most undesirable when the dressing to be held in position is near the back legs.

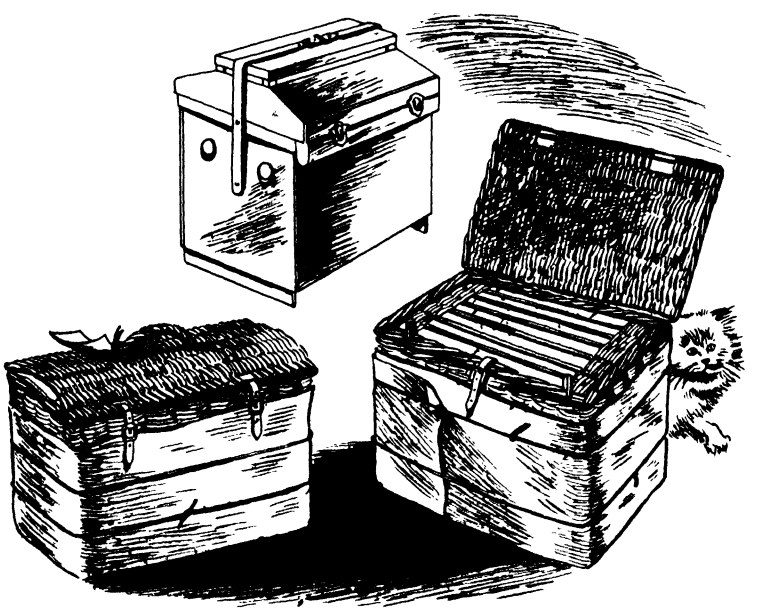
In tying a many-tailed bandage for the back, one knot should be tied in front of the forelegs and another under the tail. One soon learns from a little practical experience where to tie so that the bandage will remain in position until the time for the next dressing.

Many-tailed bandages are extravagant of material, but if good strong sheeting is used, they can be washed and used again later.

Baskets

Sleeping

Although cats are sometimes provided with a basket for a bed, on the whole a box is to be preferred for this purpose. Baskets certainly have the advantage of being light, but their structure is such that they are not very useful for excluding draughts. If a basket is used it should be lined so that the animal is protected against this possibility. Another disadvantage with a basket is that it provides so many nooks and crannies for the collection of dust in which fleas find a very suitable breeding ground. If baskets are used they should be very carefully scrubbed from time to time, and then well dusted with insect powder before being brought into use again.



TRAVELLING BASKETS AND BOXES

Travelling

Although perhaps in the case of baskets used as beds the disadvantages seem to outweigh the advantages, this is not the case with travelling baskets. For summer use the basket has much to recommend it for travelling purposes. It is light and cool, and can easily be made draughtproof. This is best achieved by covering all four sides on the outside with thick, brown paper tied firmly in position with string. Cloth can be used instead of brown paper, but this would probably need washing after each journey, whereas fresh paper can be used as often as necessary. No lining should be used for such baskets, as a cat, in a desire to get out, may easily scratch it down and the protection from draughts is rendered useless.

Most baskets have flat lids, which is a decided disadvantage, as it allows the railway people to pack the basket in so tightly with other luggage on top that the cat can obtain very little air. It is much better to have a top with a ridge, as a basket of this sort cannot be completely enclosed. The same result may be achieved by putting substantial handles on top and at each end.

It is a great mistake to think that any basket will do for sending away a cat or kitten, or that the same size basket is suitable for all ages of cats. The cat needs sufficient room to be able to turn round, but the basket must not be so large that during transit the animal is tossed from one end to the other.

It is a good plan to have a skeleton lid under the lid proper so that one can see the cat at will when it is travelling with the owner. This inner cover need only be made of stakes sufficiently close to prevent the animal from escaping. The outer lid should be secured by two strong, leather straps with buckles. Canework wears easily, and such baskets will last much longer if two strips of wood two inches wide and one inch thick are fitted under the bottom along two outside edges.

Suitable sizes for travelling baskets are :

Adult males	18″ × 14″ × 13″
Queens	17″ × 11″ × 11″
Kittens	15″ × 10½″ × 10″

When sending a cat on a journey in winter a box should always be used.

Baths

As a general rule one may say that cats should not be bathed. They object very strongly to partial immersion in water, and the risks of chill after a bath are not to be lightly undertaken. There

are other and more satisfactory methods of cleaning the coat of a cat, and these will be dealt with in separate sections.

It is possible, however, that occasionally a light-haired cat will have to be bathed when the animal has accidentally become smothered with dirt which cannot be removed by any normal method of dry cleaning. Cats have been known to fall into stagnant, slimy pools, and imagination can provide a number of equally unpleasant-smelling mischances. These are cases for bathing.

Two people are required to bath a cat ; one to do the washing and the other to hold the animal in the water.

The water must be warm, but not hot ; blood heat is quite satisfactory. Put sufficient water in a large bath almost to reach the cat's chest. With soft soap make a good lather and rub into the coat, moving from the tail towards the head. If one works from the head backwards the fur is smoothed down all the time and one never reaches the undercoat. This operation should only take a few minutes, and then the victim should be transferred into clean water for rinsing. This must be done thoroughly so that all soap is removed, otherwise it will be a very difficult task to make the coat look attractive even after much grooming has been done.

When the rinsing is complete a soft towel should be used for drying, and when the coat is very full and thick, several towels may be needed. Some cats can be dried by using an electric drier, but others are terrified by the sound of the motor.

After this thorough rubbing the coat should be carefully combed, for it is much easier to untangle the hair while it is still damp than later when it has dried.

To finish the operation place the cat in a basket near a fire, and leave it there for several hours until the coat is completely dry. A box with an open wire front, or a Spratt's show pen, are both very useful for this purpose. Care must be taken to see that the heat is not too great, and gradually the basket should be moved further away from the fire. The final grooming can then be carried out.

When a cat has been bathed it should not be allowed out of the house for the next twenty-four hours, and with this precaution risk of chill is reduced to a minimum.

Bedding

Opinion seems to be somewhat divided on the question of the most suitable bedding for cats, and some breeders go to considerable trouble and expense in purchasing bedding materials with

proprietary names. It is quite unnecessary, for even the most aristocratic of cats is perfectly satisfied with a bed made of newspaper. The great advantage of this material is that it can be frequently renewed. A blanket may be placed on top of the newspaper, but this needs frequent washing or it will become a refuge for fleas and other parasites. When cats are kept in outside catteries blanket may be dangerous, as it soon collects moisture from the air and becomes damp. The frequent airings necessary are rather a trouble, and a thick layer of newspaper is much more satisfactory. Newspaper makes quite a warm bed if used in sufficient quantity. Cushions, and specially prepared mattresses, should not be used, as in a very short time they become most unhygienic.

The cat's bedding must always be kept scrupulously clean, and should be dusted with insect powder at frequent intervals.

Bee and Wasp Stings

Cats seem to derive much pleasure in trying to catch insects, and if they are successful usually eat their prey. Although it is certainly not good for them to eat flies, the consequences are usually much more sudden and painful if the insect is either a wasp or a bee. It is not at all uncommon in summer time for a cat to be stung in the mouth. Judging from the animal's immediate reaction, such stings cause a good deal of pain. Within a few minutes there may be considerable swelling, but this fortunately does not last very long unless the sting has been injected in or under the tongue. When the tongue is affected, the cat may find it impossible to eat for twenty-four hours, and even then eating is usually difficult for several days longer.

When a bee is the cause of the trouble the sting is left behind, so, if it is at all possible, this should be found and extracted with tweezers. In practice, however, this is far easier said than done, as the pain of the sting often makes the task of inspecting the inside of the mouth a difficult one. When swelling persists for any length of time, it is usually a sign that the sting has been left behind and set up a secondary irritation.

Quite simple remedies can be used when dealing with stings. Rubbing the puncture gently with a lump of ordinary washing soda will usually provide immediate relief, and the old-fashioned remedy of rubbing the place with a piece of raw onion is also useful.

Such minor accidents are often alarming to the cat, but their consequences are not serious.

Bemax

Bemax, which is one of the products of Vitamins, Ltd., is a very valuable food supplement to keep in the cattery, for if one is uncertain whether the cat's diet contains a sufficiency of some essential vitamins and mineral salts, this substance, if added to the food, will resolve the doubt. Bemax contains, among other things, Vitamins A, B1, B2 and E, and also traces of Phosphorus, Magnesium and Iron.

A teaspoonful each day is ample for a full-grown cat, and one of its great advantages is that the animals will eat it readily when it is mixed with their food. It is thus a much simpler method of supplying these essential elements in a balanced diet than the giving of either tablets or capsules. During the war period Bemax has been in very short supply and has not been available for animal use at all, but within a comparatively short time cat breeders may again be able to buy it. (*See Balanced Diet, Vitamins.*)

Benerva Compound

This proprietary substance produced by Roche Products, Ltd. is a most valuable source of some vitamins, and has the great advantage that the tablet is small enough to make the giving of a dose a simple matter. Where there is lack of appetite after illness, or when a cat shows general signs of debility, a course of these tablets often produces most satisfactory results. Two tablets each day, one being given after each of the main meals, is a satisfactory dose, and this can be continued as long as necessary. For general use a tablet each day will be ample, and this may be crushed and mixed with the food.

The tablet contains 1 mg. of Vitamin B1, 1 mg. of Riboflavin and 15 mg. of Nicotinic Acid. Vitamin B1 and its function will be found in the section dealing with vitamins. Riboflavin is sometimes known as B2. It has a very important part to play in the animal's physical economy, for one of its main functions is to keep in healthy condition the peripheral nerves.

Biscuit Food

Most breeders wisely supplement the meat ration with some starchy foods, and in many cases brown bread is recommended as a suitable addition to diet. It is found in practice, however, that some cats find brown bread too laxative unless they have been accustomed to it from very early days.

Perhaps for most cats hard, baked biscuit foods are better than bread, and in normal times there are many varieties on the

market. When preparing such foods for use, boiling water should be poured over them some few minutes before they are mixed with the meat. All surplus water should be strained off immediately, and then the biscuit should be in a crumbly state. Biscuit food must never be fed in a sloppy condition. Cats will not appreciate it in this state, and as a general rule they digest solid food much more easily when the moisture it contains is not sufficient to dilute excessively the digestive juices.

To the uninitiated the term " biscuit food " may be somewhat misleading. It does not refer to sweet biscuits which are prepared for human consumption. Cats are usually more healthy when such delicacies are denied them. The type of food recommended is that specially prepared for feeding animals by Messrs. Spratt and other makers.



Photo : Douglas West

BLACK

CH. DELLA OF DOWNSIDE

Black Persians (*by Cyril Yeates*)

There is no more beautiful cat than a first-class Black Long-hair (Persian), by which I mean a cat with a long, lustrous, jet-black coat, good, broad head, small ears, short nose, broad muzzle and large, round, copper eyes set well apart. On the other hand, a bad Black, rusty in colour, long in head, with big ears and greeny-yellow eyes, is an abomination.

From the earliest days of the Fancy there have been classes at shows for Blacks. One of the first to make a name for himself was Satan, owned by the Hon. Mrs. McLaren Morrison. He won at the Crystal Palace in 1891, was, I believe, never beaten, and was still winning in 1897. Satan was of unknown parentage, and I don't suppose had much to boast of in the way of type. Blacks soon, however, began to improve in that respect, and it is noticeable the number that were sired by famous Blues, Mocassin, Blue San Toy, Darius and Champion San Toy II being among the sires used for Black queens. Mrs. Dee's Earlsfield Delta (Champion San Toy II and Jet) was a very famous Black. Mated to Loughborough Queenie he produced Champion Black Knight, Sweet Jetta and Earlsfield Black Prince.

In 1911 Mrs. Benest sent Baby Smut to visit Earlsfield Delta, and Champion Dirty Dick, one of the greatest Blacks of all times, was the result. He won fourteen championships and sired endless good cats. Another Black that made his mark at that time was Miss Bowtell's Earls Court Black Prince. He was by Champion Black Knight ex Kelston Sen Sen, and the sire of those two lovely queens Champion Zulanda and Champion Sally Cat. The latter won her tenth championship when ten years old.

In the years between the wars Blacks made steady improvement, and the years 1936–9 produced such a galaxy of stars as has never been seen—Champion Chadhurst Barry, Champion Chadhurst Gem, Champion Hillingdon Jackdaw, Champion Llantarnam Jumbo Boy, and the queens Champion Basildon Treasure, Carlton Black Bess, Champion Chadhurst June, Chadhurst Carissa, Champion Della of Downside, Champion Hillingdon Black Star, Nani of Culloden and Champion Llantarnam Wild Rosebud, the loveliest Black I have ever seen penned. It is impossible to mention all the good Blacks, but much of the credit for this improvement goes to that super stud, Champion Hillingdon Jackdaw, who was by the Blue, Darling of Dunesk, ex Hillingdon Black Pansy. Jackdaw sired endless lovely cats including Champion Llantarnam Wild Rosebud, Champion Llantarnam Jumbo Boy, Champion Basildon Treasure and Champion Della of Downside. The mating of the same two cats (Darling and Black Pansy) produced those lovely queens Champion Hillingdon Hebe and Champion Hillingdon Black Star. Champion Hillingdon Black Jester (To To and Hillingdon Patsy Dinah) was the sire of Champion Son o' Jester, lovely Champion Marlene and Champion Princess Badoura.

One might think that the obvious way to breed Blacks is to breed Black to Black, but of the thirty-one Black Champions

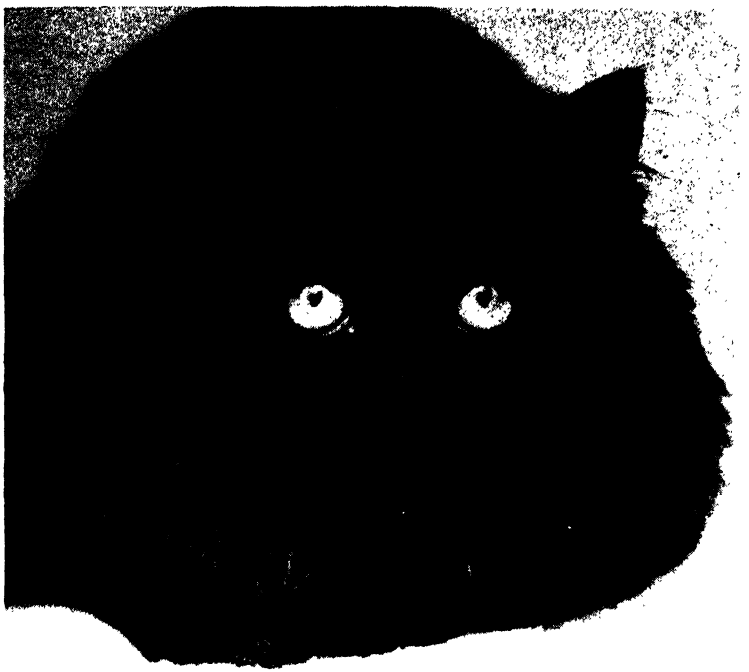
whose names appear in the Governing Council's Stud Books there is hardly one that has not a Blue for one of its parents or grandparents. In addition to Jackdaw there is Champion Ivanhoe of Hadley by Champion Azure of Hadley (Blue), Champion Chadhurst Gem by Champion Mischief of Bredon (Blue), Champion Chadhurst Barry and Champion Chadhurst June by Nogo (Blue) to mention a few.

The reason for using Blues as mates for Blacks is, of course, to improve the type, but the coats of cats bred in this way sometimes tend to be light at the roots. Red Tabbies, Brown Tabbies, Creams and Tortoiseshells mated to Blacks usually have one or more Blacks in their litters, but I cannot recall a Black Champion bred in this way. I myself have bred some very good Blacks by mating an orange-eyed White to a good Black. The resulting kittens are either pure White or pure Black, and the Blacks are very black.

Blacks are very useful animals for crossing with other breeds. They can be mated with Blues that are shady, and the resulting kittens are frequently very pale at birth but have a tendency to darken as they grow older.

When breeding Tabbies, if you mate Tabby to Tabby for several generations, markings tend to weaken, and a dash of black is the best way to counteract this. The best Tortoiseshells generally come from mating a Red Tabby to a Black, and if the colours in your Tortie are not sufficiently sharp and are too brindled she should be mated to a Black or a Blue. Blacks can be used to improve the dark mask and points in Smokes, but must be used with discretion and moderation or the silver undercoat will darken too. There have been some notable Smoke-bred Blacks. The late Mrs. Kidd's Daphne of Downside was the dam of Champion Llantarnam Wild Rosebud, and Diana of Downside was the dam of that other beautiful queen Champion Della of Downside.

Blacks are not easy cats to show. My wife, who was considered an expert in showing cats, always declared that she would rather prepare half a dozen Blues than one Black. The difficulty is to keep the lustrous black coat when once you have got it. Damp is bad for it, so your cat must never go out in wet weather. Strong sun is equally bad for it, so a Black cat has to be deprived of the health-giving sun baths it loves so much. A Black requires grooming daily, and the golden rule for success as given to me many years ago by Mrs. Benest, owner of Champion Dirty Dick, Lady Cardsharper and many other fliers, is to comb, comb, comb !



BLACK
MOORMEAD JENNIFER

Blacks are not as popular as they deserve to be, for which I think their kittens are largely to blame, for these seldom resemble the little jet-black creatures portrayed on Christmas cards, calendars and chocolate-boxes, being frequently any colour but black. When we drew up the Standard of Points for Blacks we added the following note : " N.B.—Black Long-haired kittens are often a very bad colour up to five or six months, their coats being grey or rusty in parts, and sometimes freely speckled with white hairs. Fanciers should not condemn them on this account if good in other respects, as these kittens frequently turn into the densest Blacks." Here is an example of such unsoundness. In 1922 was born a kitten by the Blue, Lanark Lad, ex Princess Flandria (Black) and registered Heathside Flanark. When I saw him, when he was a few months old, he had two silvery-white frills, one above the other ! As an adult he was one of the densest Blacks I ever saw, and became a full Champion and went to America.

I think I am right in saying that Blacks are more popular in America than they are in this country, and are of a very high

standard. One of the outstanding cats over there today is Great Lakes Charcoal, whose parents, Hawthornsyke Ian and Black Diamond of Takeley, are both British-bred cats. Another British-bred cat that has made his mark in America is Champion Imp. Great Lakes Basildon Talisman (Champion Hillingdon Jackdaw and Basildon Black Gem) whom Mrs. Askew exported with three queens, Delilah of Takeley, Black Diamond of Takeley and Black Pearl of Takeley, just before the war.

OFFICIAL STANDARD

Colour : Lustrous raven black to the roots, and free from rustiness, shading, white hairs, or markings of any kind.

Coat : Long and flowing on body, full frill and brush, which should be short and broad.

Body : Cobby and massive, without being coarse, with plenty of bone and substance, and low on the leg.

Head : Round and broad, with plenty of space between the ears, which should be small, neat and well covered, short nose, full cheeks and broad muzzle.

Eyes : Large, round and wide open, copper or deep orange in colour, with no green rim.

N.B. : Black Long-haired kittens are often a very bad colour up to five or six months, their coats being grey or rusty in parts, and sometimes freely speckled with white hairs. Fanciers should not condemn them on this account if good in other respects, as these kittens frequently turn into the densest Blacks.

SCALE OF POINTS

Colour	25
Coat	20
Body	20
Head	20
Eyes	15
	100

Black and White Persians (*by Cyril Yeates*)

These handsome cats, sometimes called Magpie cats, have never been recognized as a distinct breed by the Governing Council. Some years ago the late Lady Alexander bred some and tried to popularize them, guaranteeing classes for them at the Crystal Palace Shows, but they did not catch on.

A well-marked Black and White is a very ornamental cat. The

ground colour should be black and should predominate. The feet and chest should be white, and there should be a white blaze running up the centre of the face. All markings must be symmetrical, and to be perfect the cat should have a white collar completely encircling its neck. Eyes should be orange or copper.

I have only seen one perfect Black and White Long-hair. He was bred by the late Mrs. Glenfield, who christened him " The Dutchman ". Alas ! he died when only a few months old, much to his owner's disappointment.

Short-haired Black and Whites are frequently to be seen. In Kensington a few years ago they were very numerous, and I have seen some perfect specimens. Sometimes they have very irregular face markings which give them a very quaint appearance.

Bladder Troubles

Fortunately bladder troubles are not very common with cats, but sooner or later one is almost certain to have to deal with this distressing complaint. Nine times out of ten the sufferer is a male.

In the case of this disorder it is most important to notice the first symptoms, for treatment is much better applied before the acute stage of the complaint is reached.

Whenever a cat tries frequently to pass water, and passes only a small quantity on each occasion, one can be quite convinced that the urinary system needs attention. To be able to diagnose the actual cause of the trouble is much more difficult, but if one considers the animal's past history, the right clue may be found. Sometimes the urine is excessively acid and consequently irritates the delicate membranes of the bladder and ureter. If one feels that this is the case, a 2-gr. tablet of sodium citrate will help matters considerably. This should be given three times a day and the treatment continued for at least a week. Potassium citrate is equally valuable, but its bitter taste is obvious when it is dissolved in milk, and may therefore be refused. At such times the cat must be persuaded to drink as much as possible, for the greatest relief is obtained from flushing the kidneys and bladder. Warmth is also very necessary, and the cat should not be allowed to run the slightest risk of chill.

Sometimes the cause of the trouble is the formation of gravel or stone in the bladder. In this case the same treatment can be applied, and must be continued for at least a week after all symptoms have disappeared. Particular attention must be paid to diet. A diet which is too rich and entirely lacking in green vegetables is a very frequent cause of gravel formation. A cat

that is allowed to eat too well, and is not permitted to take abundant exercise, is prone to many ills, and bladder trouble is only one of these.

If home treatment does not show definite results in a day or two, or the condition of the animal deteriorates, it is essential to call in a vet. without delay. It is useless to wait until there is a complete stoppage, for the use of a catheter on a male cat is no easy task, and probably many vets. do not possess one sufficiently small for the purpose.

A cat suffering from urinary troubles will spend much of its time licking itself in a vain attempt to obtain relief. If, after treatment for a day or two, this licking still continues, that fact must be taken as a sign that the time has come to obtain help to prevent the acute stage from developing. The vet. may also provide a mixture containing hexamine and buchu, both of which are helpful in bladder irritation. Hexamine is also an excellent internal antiseptic.

Occasionally an old male will display similar symptoms to those already described, and yet the cause of the trouble is entirely different. A male which has been allowed too much sexual activity sometimes develops inflammation of the prostate gland. If this is the case the breeder is probably to blame for allowing the animal to be used too frequently. Such an animal must not be allowed to mate until completely cured, and if the trouble persists neutering may be the only satisfactory remedy.

It is well to remember that a cat which has suffered from bladder trouble is a likely victim of further attacks, and one should from time to time give such an animal a course of treatment to act as a preventive.

When females are similarly afflicted it is usually those which are accustomed to relieve themselves outside the house. They refuse to use a sanitary tray, and consequently do not empty the bladder sufficiently frequently unless the owner is careful to let them out of the house at regular intervals. The remedy here is obvious, and the animal should not be allowed to develop this harmful habit, which seems to produce a temporary paralysis of the sphincter muscles.

All cats should be carefully watched for bladder disturbance after return from a show, where the noise and strangeness of their surroundings interfere with their normal habits.

With cats suffering from any form of urinary trouble the use of meat should be restricted, and for a time fish should be introduced to take its place. As a drink barley water is valuable, and many cats will drink it when it is sweetened.

Bleeding

See Hæmorrhage.

Blindness

Old cats sometimes become blind in one or both eyes as a result of the formation of cataract. In such cases, although surgical operation may produce improvement, the condition and age of the animal is usually such that painless death is the wisest treatment.

In young cats blindness or partial blindness is rare except as the result of accident or the formation of an ulcer on the lens. Damage to the eyeball as the result of fighting may lead to infection, with the result that although the wound heals, the lens becomes somewhat opaque. When this happens the degree of blindness will depend upon the depth of the opacity.

Ulcers on the eye are sometimes met with as one of the complications of distemper. One may notice on the ball of the eye one or more depressed circles. These usually heal quite rapidly with no effect on sight unless they are extensive and cover the lens.

In very young kittens the same results will sometimes follow upon congenital conjunctivitis, and it is for this reason that one must endeavour to prevent the lid from adhering to the ball of the eye.

Once the sight has been impaired there is very little that can be done to improve matters, except in those cases where an unnatural covering to the eye, such as cataract, can be removed.

A cat with only one eye is naturally handicapped, but it can usually manage to fend for itself quite well. Unfortunately, however, a damaged eye is unpleasant to look at and completely ruins the appearance of the cat.

Blind Teat

When a cat is nursing kittens it is most important that the teats should be carefully examined from time to time, as occasionally it happens that one teat is " blind ". This means that the channel from the gland in which the milk is formed through the teat is blocked, and consequently the milk cannot be drawn off.

Inspection will usually show whether a teat is being used by the kittens, and if this is not the case the milk gland becomes hard and inflamed. As soon as the trouble is noticed hot fomentations should be applied, and the gland and teat gently massaged in an attempt to get the milk to pass through the teat. The blockage is usually only of a temporary kind, and once the flow has been

started there is rarely any further trouble. Prompt measures are always necessary in dealing with disorders of the milk glands, for if the matter is neglected it is quite possible that an abscess will be formed. This is much more difficult to treat, and may make the queen so ill that she is not sufficiently fit to look after her family.

When dealing with the teats of the nursing mother one must always be particularly careful not to use any ointments which can upset the kittens. Olive oil is most soothing in cases of inflammation and cannot do any harm.

If a cat has suffered from a blind teat it is always advisable to watch the development of her nipples during future pregnancies to make certain that they are all in a normal, healthy condition.



BLUE
CH. PEDRO OF ALLINGTON

Blue Persians (*by Lady Eardley Wilmot*)

The perfect Blue Persian is a thing to be dreamed of but never seen. During more than twenty years that I have been in the Fancy I have never been so lucky as to come across this perfect specimen, and I fear I never shall. When the cat appears which seems to be perfect in every detail, closer inspection shows a defect which mars perfection. The ideal of the perfect cat is so hard to approach.

To begin with there is colour and coat. Whether the fur is light or dark it must be even in colour from the head to the tip of the tail, and each individual hair must show no variation in shade

from the tip to the root. Often the coat may appear to be even in colour on the surface, but when the fur is parted one finds that the colour pales as it approaches the skin.

Sometimes one can see that the frill is paler in colour than the rest of the coat, or it may be that there are even a few white hairs. These are both faults and would not be found in the perfect cat.

The coat should be fine in texture and of great length, with a full frill extending well over the shoulders. The tail must be well furred, short and bushy, and show no sign of tapering towards the tip.

The head must be broad with small ears set wide apart ; a broad nose with a tendency to tilt a little at the tip, and perhaps even more important, a strong chin. A combination of these qualities produces that round, strong head which one likes to see on a Blue.

The body must be cobby with short legs and well-tufted feet, and one then gets the impression of strength.

Large, round eyes of deep gold or coppery-red finish off this picture of the perfect cat.

To produce such a cat is the aim of all breeders, but how difficult it is !

Improvements are rarely produced rapidly, and on the whole it is the best policy to attempt to improve certain qualities by a particular mating. For instance, a Blue may sometimes be mated to Black in order to obtain those almost red eyes which one more often finds in Blacks than in any other variety.

When dealing with type one must look for a male who excels in those qualities in which the queen is weak. By this method one hopes to breed out the defects and at the same time accentuate the good qualities. Some males hand on their good qualities to all the kittens they produce, although naturally the influence of the mother will also be seen. These are the males that one must try to find.

Quality and length of coat depend in large measure on the coats possessed by the parents, but it must be remembered that feeding almost from the day of birth also influences this. I became convinced of this latter fact from an experience I had some years ago.

A queen had four kittens. Two of these kittens were given to a queen in another cattery who had just lost her family. These kittens developed coats of wonderful quality and length, whereas the other two had only indifferent coats. The quality of the milk provided by the two mothers probably accounted for this difference. One must always remember that good rearing plays an important role in the development of the adult cat.



Photo : Weekly Illustrated

BLUE

CH. HEATHERLAND BLUE BOY

When showing cats one must realize that even the ideal cat may be " put down " if it is not shown in perfect condition. The showing of Blues entails a great deal of labour if they are to be shown at their best.

If the coat is to be in perfect condition it must be groomed carefully every day. A week before the show the cat should be bathed, but I hesitate to recommend this to any but experienced breeders.

The temperature of the water should be 100° F., and to the water must be added soap or other substances which are suitable for the texture of the cat's coat.

For a heavy, flat-lying coat a lather made of Lux seems best ; for a lighter, fluffier coat I have found that green soft soap, with a pinch of sulphur and potash added to the water, is best. When Lux is used rinsing must be done thoroughly, but when green soft soap is used, rinsing is not necessary. It is always a good plan to dry with an electric drier, but not all cats will allow this method.

On the next day a thorough grooming should be given, and a start should be made with the powdering of the coat.

Place a small quantity of powder in a saucer and then dip in the thumb and first finger of the right hand. These should then be rubbed along small bunches of hair. To carry this out over the whole of the coat takes a great deal of time, but for the first half of the week before a show it must be done for two or three hours every day. During the last three days some of this powder will be

brushed out, but the coat will not be cleared until the day before the show. On that last day another light dusting of powder should be given, and this time it must be beaten out by gently patting the coat. It is really remarkable how easily this last powder is removed, leaving the fur clean, brilliant and full of life. When the coat is fully prepared each individual hair should stand out separately, giving the effect of a cloud of blue fur.

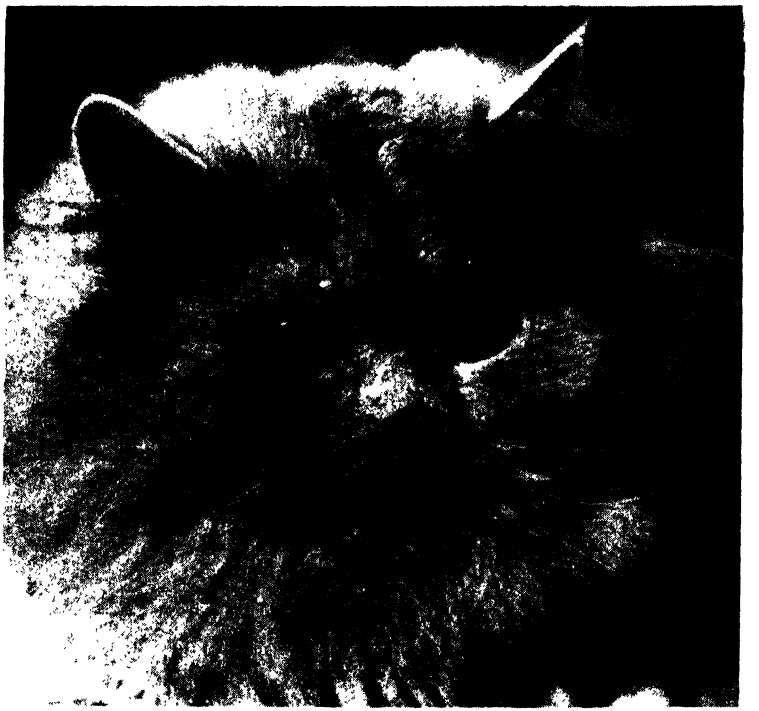
One must make sure that there is no powder left in the coat when the cat is judged or disqualification will follow. This is a penalty that I have incurred more than once !

I have indeed seen some wonderful Blues in the many years that I have been in the Fancy. I remember well the first show I ever attended, where I first saw Barry Blue Prince. I had gone to this show with a quite humble idea of purchasing one young queen, but I came away fired with ambition, having purchased two young males, Dazzler and Gentleman. The latter afterwards became Champion Gentleman.

Life, however, is not meant to be easy, and after I had been breeding for some years there appeared the almost perfect cat, Champion Mischief of Bredon. He took the shine out of many a young cat who otherwise would have been a shining light in the history of Blues. It was because I foresaw this that I sold, not without many a pang, a lovely young cat who had been placed second to Champion Mischief. He went to America, where he had a very successful show career, winning many prizes and championships.

Here Champion Mischief reigned supreme for many shows. He was indeed a magnificent cat, the type that everyone would be proud to possess.

Other beautiful cats of that time were Champion Billy Bumpet, Eros of Allington, Champion Dion of Allington and Champion Gentleman of Henley, but when so many beautiful cats appeared it seems invidious to mention any by name. I must, however, make one further exception, the dearly-loved and beautiful Champion Raleigh. I saw him as a young cat and instinctively knew that if he were for sale nothing on earth could prevent me from buying him. At his first few shows he got no recognition and came away almost cardless, but that did not deter me, and I never regretted for one moment having bought him. He was not only one of the most charming pets I ever had, and a wonderful stud, but he also became famous at the shows. His pale, flowing coat, his brilliant, gleaming, red eyes, together with his wonderful type, easily won him his title, and only his untimely death robbed him of many further honours.



BLUE

CH. DEWDROP OF DUNESK

Before this last war there were so many magnificent Blues that it was with great joy that I saw again some really wonderful cats at the first post-war show at Nottingham. The quality of stock has not deteriorated, and this augurs well for the future.

May some of you who read this become the breeders of some of the famous Blues of the future.

OFFICIAL STANDARD

Coat : Any shade of blue allowable, sound and even in colour ; free from markings, shadings, or any white hairs. Fur long, thick and soft in texture. Frill full.

Head : Broad and round, with width between the ears. Face and nose short. Ears small and tufted. Cheeks well developed.

Eyes : Deep orange or copper ; large, round and full, without a trace of green.

Body : Cobby, and low on the legs.

Tail : Short and full, not tapering.

Members should not be deterred from showing their cats if they do not come up to the high standard set forth in the above definition.

SCALE OF POINTS

Coat	20
Condition	10
Head	25
Eyes	20
Body	15
Tail	10
	100

Blue-Cream Persians (*by Kathleen Yorke*)

From the Blues and Creams the Blue-Cream is produced.

This is a delightful and picturesque variety, and when the pale colours are softly intermingled the shot-silk effect is most attractive. This intermingling of the colours which the Standard demands is not easy to achieve, as one often finds that many specimens are patched like the Tortoiseshell.

Even when the queen which one is using is almost perfect, the kittens may be disappointing. One must not be disappointed, however, for continued effort will eventually achieve success.

As in the case of Creams the Standard allows 50 points for colour of coat.

With Blue-Creams one usually finds excellent type, with deep copper eyes. In fact it is quite common for kittens to inherit the outstanding qualities of both parents.

A Blue-Cream male is very rare, but the occasional specimen appears from time to time.

When breeding it is a good plan to mate a Blue-Cream female to a pale, unmarked Cream male. This mating should produce male and female Creams and also Blue-Cream females.

I must refer here to a Blue-Cream female who to my mind is perfect in colouring. This is Pelham Silver Girl, the daughter of Sweetaboy and the Blue-Cream queen Pelham Angela. We need look no further than to this mother and daughter to see how very lovely a show Blue-Cream can be. I hope that both these queens will eventually become full Champions. Angela has already two certificates and has only been shown twice.

A great fault in Blue-Creams is a solid patch of colour on either head, body or leg. The cream also must be of the palest shade with no trace of red.

This section should be read in conjunction with that on Creams, for these two varieties are so closely associated that it is very difficult to treat them separately.

OFFICIAL STANDARD

Colour and Markings : To consist of blue and cream, softly intermingled.

Coat : To be dense and very soft and silky.

Head and Type : Head broad and round, tiny ears, well placed and well tufted ; short, broad nose, colour intermingled on face.

Eyes : Deep copper or orange.

Body : Short, cobby and massive, short thick legs.

SCALE OF POINTS

Coat	50
Head and Type	20
Eyes	15
Body	15
	100

Boarding Establishments

There are times when it is very convenient to be able to send a cat to a boarding establishment for a week or two, particularly if one is going on holiday and the cat cannot also be taken. Whenever it is possible, it is better to leave the animal in surroundings which it knows, but naturally this should not be done if the house is to be left unattended. It is not very satisfactory to arrange for a neighbour to see to the animal's food, and for the rest of the time to leave it entirely to its own devices. Although it has been said on numerous occasions that cats are attached to particular places rather than persons, this is only a half truth. Quite often a cat which is used to human companionship will wander off to seek this comfort elsewhere when its normal companions are away. Those cats which are reported as having travelled long distances to return to a house which they have long known are usually those which have had little opportunity for forming firm attachments to persons. The cat that is used to walking alone prefers to do that in its accustomed haunts.

Rather than leave a cat lonely and wretched, make arrangements when necessary for it to go to a cattery where you know



BLUE-CREAM
CH. MOORMEAD BUTTERCUP

it will receive personal attention, but never make such arrangements until you have visited the place and convinced yourself of its suitability. An expensive advertisement, and a high boarding fee, are not necessarily an indication of suitability.

There are good places for cats run by people who have a genuine interest in the animals, and there are others which are most unsatisfactory. A visit will usually reassure one or provide proof of the need for further search. One can usually judge from the appearance of any animals which have been in the establishment for some time whether they are receiving proper care and attention. Make sure that satisfactory accommodation exists for isolation when necessary, and also that proper care can be given to animals that are sick. It is only after you have assured yourself on these points that the cost of boarding should be considered.

If a cat is to receive good food and proper care, one should consider half a guinea a week as a reasonable charge.

When you decide to leave a cat at such a place make sure that you also leave your address with the proprietor in case of need. It is a good plan to place the cat where you can make the journey to see it if necessary with the least inconvenience to yourself. This advice is necessary because some cats become so unhappy that they refuse to eat, and if their stay is of some considerable time become seriously ill. Siamese are particularly difficult in this respect because they, perhaps more than any other variety, need affection and personal attention at all times. When one is with them they give every appearance of self-reliance and independence, but this is merely outward seeming.

There is a big need for more boarding establishments for cats than exist at present, but the responsibilities of such an undertaking are heavy though the financial returns may be attractive. It is, therefore, not surprising that many suitable people hesitate to shoulder such responsibilities.

Any person whose main object was to breed cats would be most unwise to take in boarders, for the risk of introducing infection would be very great indeed. In the past a number of well-known breeders have learned the truth of this statement from painful personal experience.

Bone Meal

Bone Meal is a very valuable addition to diet, especially for kittens, and a small quantity sprinkled on one of the solid meals each day will provide minerals of the greatest importance in bone formation. A suitable quantity for a three-months kitten and onwards is a level saltspoonful. This quantity should be reached by gradual stages, but one can start with a small pinch at six weeks. There are two qualities of steamed Bone Meal; one used for its manurial value, and the other prepared for feeding purposes. Make sure that the correct article is purchased.

Bone Meal is very rich in calcium and phosphorus and also contains about 5 per cent of manganese.

Bones (for Teething Kittens)

At times when kittens are teething they enjoy being able to gnaw a bone. Particularly is this the case with Siamese. Although the gums are at this time inflamed and sore, it seems to help them to be able to bite on something really hard. At the same time this gnawing hastens the process whereby the new tooth works through the gum. Some Siamese, when teething, are particularly destructive, and will chew blankets or baskets until they are ruined. A bone with a little meat

left on it will often divert attention from more valuable objects and yet satisfy the kitten's need.

Naturally considerable care must be taken in the choice of a bone, for it would be most dangerous to give a kitten, or even a cat for that matter, a bone which would easily splinter. Rabbit and poultry bones are most undesirable and should always be avoided, for they splinter very easily. The great danger with bone splinters is that they often get wedged in the animal's mouth or throat, and there cause considerable pain and damage before they are removed. If such splinters are swallowed there may be even more serious consequences.

For a kitten a shin bone of mutton is quite satisfactory. It is a good plan always to leave a little meat on the bone, for in trying to eat this the youngster will be initiated into the art of bone chewing. A bare bone is usually not of sufficient interest to cause a kitten to take the slightest notice of it.

Bran Baths

Although it is not advisable to wash a cat except on the rarest occasions, and then only as a matter of necessity, there are times when something more than ordinary brushing and combing is required. Light-coated cats kept in towns often find it impossible to maintain the light colour of their coats by their own efforts, and such a cat, if it is to be shown, will need special preparation. Normally various powders can be used as cleaning agents, but there is a limit to the quantity of dirt which can be removed by powder, and grease merely unites with the powder and is very difficult to brush out. Too much use of powder before a show also produces the risk of some remaining in the coat on show day. There is then the possibility of disqualification. Powdering to clean a coat is perfectly justified, but if powder is left in it may have an effect upon the normal colour of the coat, and would thus court disqualification as being an unfair preparation for show. The likely explanation is that the owner has been careless in brushing out the powder, but a judge should have no hesitation in passing such an animal.

Thus if powder cannot be used some other method of dry cleaning must be found, and a very suitable alternative is bran.

A quantity of coarse bran should be placed in several clean paper bags, and then put in an oven and heated until the bran feels really hot to the hand. A large bath or bowl must be prepared in which to stand the cat. Remove one of the bags from the oven and rub the bran carefully into the coat, making quite sure that the undercoat right down to the skin is reached.

The remaining bags are kept in the oven until they are required, for although bran quickly gets hot it loses its heat equally rapidly. Really hot bran is essential. The heat melts the grease in the fur, and this in turn is absorbed by the bran.

When the whole of the coat has been treated in this way and particular attention has been paid to the tail, especially in the case of males, all the surplus bran must be removed with brush and comb. The whole process does not take more than a few minutes, and the fur will now be in excellent condition, free from both grease and dirt.

After this treatment only a small amount of powder will be needed on the day before the show, and careful brushing will leave no surplus.

Brand's Essence

At times the use of Brand's Essence of beef may save the life of a valuable cat when the case has seemed to be almost hopeless. When illness has been prolonged and severe, in all probability the animal will have taken no food for some days, and it is really remarkable how quickly cats lose flesh and strength when they are completely off their food.

One of the critical times in a serious illness is just at the point where all the symptoms of the disease have disappeared and the cat is left in a state of complete exhaustion. The animal has no appetite, and to attempt to feed it with solid food is often waste of effort, if not actually dangerous. What is needed is a concentrated food which will increase the natural metabolism and which can be quickly absorbed by the system. Brand's Essence in many cases just fills this need.

When purchased it is usually in the form of a soft jelly, but it can be made liquid by raising it to blood heat. Half a teaspoonful given every two hours often works wonders, and gives to cats, who are usually notoriously bad patients, sufficient strength again to develop the desire to live. After twenty-four hours the dose can be increased to a full teaspoonful, and it is not long after this that the animal shows a desire for more solid food.

Obviously such essences cannot be cheap, but the expense is well justified if it saves the life of an animal which one does not wish to lose.

Brand's Essence is mentioned by name because it has been used with success, but there are without doubt other proprietary essences which would fulfil the same purpose.

Breath, Foul

There are a number of causes for unpleasant breath in cats, but there are probably only two of them which come within the scope of the ordinary cat keeper as far as diagnosis and treatment are concerned.

The usual cause for foul breath is trouble within the mouth itself, and this is often connected with the condition of the teeth. Most cats develop tartar on the teeth, and this, when soft, becomes mixed with food that is eaten. This food decomposes and the smell emitted from the mouth is most unpleasant. As soon as the breath is noticed to be tainted the mouth and teeth should be inspected, and if tartar is obvious this should at once be removed. Usually the unpleasant smell will disappear in a day or two, and the process can be speeded up if a mouth-wash consisting of glyco-thymoline mixed with three parts of water is used twice a day. If the tartar is not removed, it gradually extends down the neck of the tooth and opens the gum. When decomposition takes place here it is much more difficult to clear up, particularly in the bottom jaw. T.C.P., mixed as in the case of the glyco-thymoline, is a better mouth-wash in this case, for although it may not cure the trouble more quickly it will certainly conceal much of the offensiveness of the breath.

Digestive disorders also taint the breath, but in this case it is unusual for the offensiveness to be as great as in the case of tooth trouble. A little experience enables one to distinguish between the two possible causes, particularly as mouth trouble will persist whereas the smell of a disturbed digestion lasts no longer than the digestive trouble. This rarely extends beyond a few days. When any form of digestive trouble is suspected, mild aperients and a careful attention to diet should soon bring about a definite improvement.

Breathing

When in a state of rest a cat normally breathes at the rate of 26 to 30 respirations per minute, but this number will vary slightly according to the age of the animal, as with increasing age there is a tendency for respiration to become somewhat slower. Young kittens also breathe at a faster rate than adults.

If one watches a sleeping cat, one notices that this breathing is usually quite shallow, but that every seventh or eighth breath seems to be considerably deeper. In health breathing is

practically silent, and can only be heard when one approaches very close to the animal's nostrils. It must be remembered, however, that cats can snore just as efficiently as some human beings.

In cases of illness great changes may take place in respiration.

When bronchitis or pneumonia are present, breathing is rapid and laboured. It is quite obvious that the animal is in pain and also alarmed at its condition. In fact the cat is almost afraid to breathe, and consequently individual breaths are shallow. Such breathing is usually noisy and most distressing to the person looking after the animal. Any serious inflammation of windpipe or lungs will produce this rapid breathing.

With fever in which the lungs are not primarily the seat of the trouble, the breathing is still rapid but is rarely noisy. The higher the degree of fever the more rapid is the breathing just so long as the strength of the animal is maintained.

When the rate of breathing drops very considerably, the cat's condition must be regarded as most serious. If the animal has been suffering from some acute form of disease, a marked drop in the breathing rate is often a forerunner of death.

The ordinary cat breeder cannot expect to be able to diagnose accurately all the possible causes of abnormal breathing, but when such changes are noticed, a veterinary surgeon should be consulted. Intelligent observation can be very helpful, but treatment must be left to the trained practitioner.

Breech Birth

It sometimes happens that a kitten is wrongly presented at the time of birth, and instead of the head appearing first it is the tail and back legs which are presented. A kitten in this position often causes the mother considerable difficulty and she may well need some help. If sufficient of the kitten protrudes to permit a firm grip being obtained on the body, much help can usually be given, and the kitten will be produced much more quickly and with less exhaustion of the queen than would otherwise be the case.

It is worse than useless to grasp the kitten and then endeavour to pull it out of the passage, for this will almost certainly mean the death of the kitten, and may at the same time do serious damage to the mother. One must wait until the queen starts to strain and then co-ordinate one's efforts with hers. Patience is the essence of success in an undertaking of this kind.

It is quite likely that the kitten will be dead when it is born, but unless it is obviously damaged every attempt should be made

to establish breathing. Death usually occurs because of lack of air due to the time that the small creature has spent on its way from the uterus to air outside.

Some queens always seem to have one breech presentation in each litter, but it is very rare for the whole of the litter to be produced in this way. Naturally one pays particular attention to a queen who has to endure this misfortune, but as the breech presentation is often with the first kitten, she may well have the rest of the litter without any difficulty at all.

It must not be assumed that because the kitten is presented the wrong way round help is essential, and it is far better not to interfere until one is convinced that the continued labour of the queen is making no progress.

One must be on one's guard against an accident which sometimes happens with breech births. The queen is at times so distressed at her lack of success that she will not stay in her box, but attempts to walk round the room. If this happens the kitten may be dropped tail first on to a hard surface and the tail will thus be damaged. When this happens the end of the tail shrivels within a few days and then later falls off. Such a kitten is not ruined for breeding purposes, but the appearance of a short-tailed cat is certainly not as attractive as one that is normal in this respect. Naturally a cat deformed in this way could not win on the show bench.

Breeding

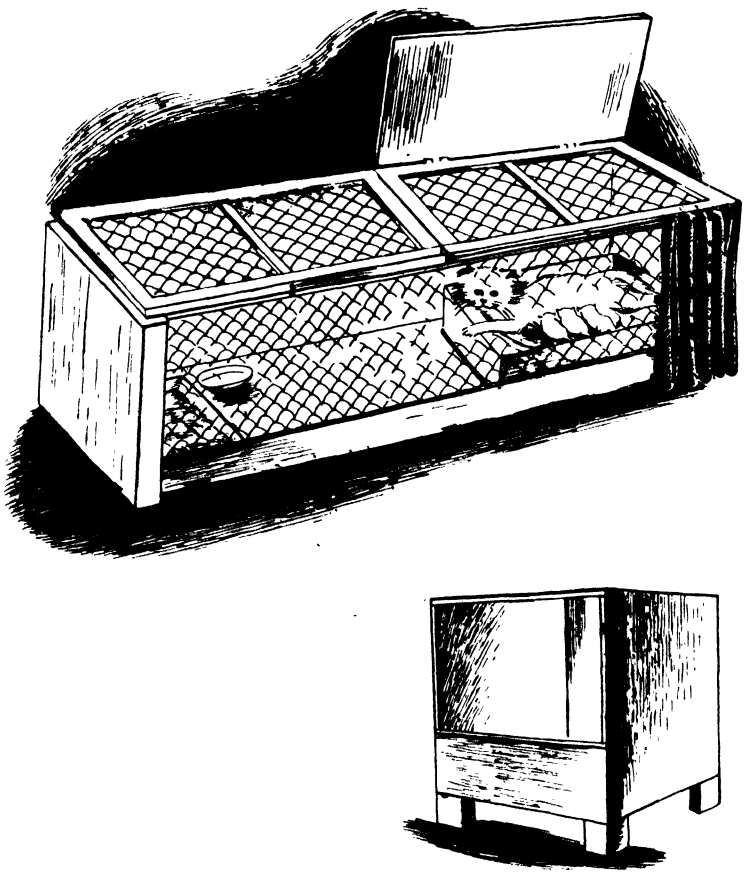
See Mating.

Breeding Quarters

If one or two queens are kept for breeding, and are house cats, the sleeping box is quite satisfactory for the mother and her litter. For this event, however, the cat may need more quietness than she would obtain in the room where the box is usually kept. A spare room is an ideal place for the queen to have her family, and also for her kittens when they start to run about. The queen is all the better for little disturbance, and the growing kittens need plenty of space for exercise where they are also safe from human feet and the fright caused by the appearance of large animals such as dogs. If there is no spare room available, then choose the room which is least used. If suitable accommodation cannot be provided in the house it is unwise to attempt to breed unless you use an outside cattery. (*See Catteries.*)

If you keep a male for stud purposes it is quite impossible to

allow him to live in the house during the normal breeding season. Some studs, however, can be allowed into the house during the winter. It is doubtful, though, whether it is kind treatment for the stud, who may well object to segregation after a period of complete freedom. It is much wiser to accustom him to a stud house while he is still immature, and make that his headquarters for life. (*See Stud House.*)



INDOOR BREEDING QUARTERS

Breeding Table

January

Mated	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Kittens	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22

March

January

Mated	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Kittens	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6

March April

February

Mated	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Kittens	7	8	9	10	11	12	13	14	15	16	17	18	19	20

April

February

Mated	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Kittens	21	22	23	24	25	26	27	28	29	30	1	2	3	4

April May

March

Mated	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Kittens	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

May

March

Mated	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Kittens	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4

May June

April

Mated	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Kittens	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

June

April

Mated	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Kittens	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4

June July

May

Mated	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Kittens	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

July

May

Mated	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Kittens	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4

July August

June

Mated	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Kittens	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

August

June

Mated	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Kittens	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3

August September

July

Mated	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Kittens	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

September

July

Mated	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Kittens	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4

September October

August

Mated	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Kittens	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

October

August

Mated	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Kittens	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4

October November

	September														
Mated	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Kittens	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	November														

	September														
Mated	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Kittens	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4
	November											December			

	October															
Mated	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Kittens	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	December															

	October															
Mated	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Kittens	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	
	December											January				

	November														
Mated	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Kittens	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	January														

	November														
Mated	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Kittens	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3
	January												February		

	December															
Mated	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Kittens	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	February															

	December															
Mated	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Kittens	20	21	22	23	24	25	26	27	28	1	2	3	4	5	6	
	February											March				

Brindling

The term brindling refers to the mixing of different-coloured hairs in a patch of colour which should be solid and thus made up entirely of one colour.

Siamese, if seal-pointed, should have a mask whose colour is entirely seal brown. One often finds, however, lighter hairs, usually of the body colour, intermingled with this very dark brown. This is a definite fault and would be penalized at a show. Sometimes these lighter hairs are even white, and such a fault is still more noticeable.

In a variety such as Tortoiseshell and White the three different colours which must be found on the body should be absolutely pure in colour with no sign of brindling. It is, however, quite rare to find a patched cat of this type with no stray hairs of the wrong colour, but the term brindling would only be used when the admixture of lighter hairs was sufficient to affect quite definitely the density of colour.

In breeding operations one must pay due consideration to such faults, for there is a definite tendency for such troubles to be accentuated in the coat of the offspring, particularly if both parents display the same colour fault. When the brindling is bad the animal must not be expected to produce show specimens. Actually it would be better not to breed from such animals, but some breeders, unhappily, do not look at their breeding operations with an eye to improving the breed. Few breeders, however, do other than sell their kittens, and thus faults become perpetuated because some purchasers are not sufficiently experienced to realize the dangers.

British Short-Hair Cat, The (*by Basil Rees*)

Probably no other animal is so much in evidence as the British cat ; in country and town, in streets and lanes, on wharfs, in barns, in stables, he is there filling on the one hand the role of the hunter of rats and mice, on the other occupying the position of the fireside cat of the English home where he brings pleasure, joy and companionship to countless thousands.

Under these conditions, however, the British Short-hair is rarely seen true to type and colour, and therefore cannot be appreciated as such. Free living and free mating have naturally resulted in the mongrel—a nasty word, but necessary to express a condition. As a cat he is as loving and capable of being loved as any pedigreed aristocrat, and every breeder will cherish memories of some " ugly duckling " who has held or still holds a very large place in his heart, but such is not the real thing.

The British Short-hair bred true to type is a thing of charm and of beauty. There is nothing more attractive than the perfectly marked Tabby, the Blue with velvet-like and level coat, the White with lovely sapphire eyes, the Black, all jet and glossy, the Cream reminiscent of the Devonshire luxury, the Tortoiseshell resplendent in red and black, and all possessing that true personality essentially connected with every member of the feline race.

The history of the origin of the British cat is both vague and scanty. The popular idea that it was the outcome of the taming of our own ancient wild cat is discredited by the fact that, whereas in the Middle Ages the domesticated pet was rare and highly valued, the wild cat was plentiful and formed an object for the chase. It was also of commercial value for its fur, which was used for the trimming of ladies' dresses. The majority of writers and authorities, however, incline to the view that the British Short-hair was the result of the inter-breeding of the Egyptian sacred cat with the wild variety.

The British Short-hair as we know it today is a cat of a distinct type. The head possesses good round top-skull, is broad between the ears which are small and slightly rounded at the tips ; the body is well knit and powerful, and has both breadth and fullness of chest ; the tail, thick at the base, tapers to the point and is short rather than long ; the feet are neat and well rounded and the coat is short, fine and close, neither woolly nor cottony. The general appearance is one of activity and vigour coupled with a pleasing scheme of proportion throughout the entire body structure.

It is responsive and extremely intelligent. One writer has attributed this intelligence to its having in the past had its wits sharpened by the necessity of scrambling for a livelihood. I do not like to think this, and I find it hard to believe ; I prefer to think that this intelligence is an integral characteristic of the breed, and I feel sure that it is so.

I have heard people say that Short-hairs are not " cuddly " cats. I do not agree ; they love to be nursed and fondled, they are firm and loyal friends and their affection is second to none.

The British Short-hair suffered more than any other variety during the Great War, but a handful of devoted breeders kept things going, and the Britisher showed signs of recovery after a period of years ; indeed by 1938 quality had much improved, many more were being bred and the show pens were beginning to be reasonably occupied ; then came the World War and nearly delivered the knockout blow, nearly but not quite ; some

good stock and a few enthusiasts survived, and because, therefore, the Short-hairs are a small though vitally important section of the Fancy, they offer tremendous scope especially to new breeders, and provide great opportunities for them to develop, improve and win.

The management and breeding of British Short-hairs present no particular difficulties, rather the reverse. They are very hardy and will thrive in an outdoor cattery, but the accommodation must be weatherproof, and weatherproof means weatherproof; the house must be well constructed and free from damp and draught, also of sufficient substance to counterbalance extreme changes of temperature. Good and comfortable beds are essential and as large a run as possible.

When an outdoor cattery is used it is desirable when possible to have two rooms indoors, one for queens when kittening, etc., and one as a sick room in case of serious illness where a cat or kitten needs extra warmth or hourly attention, and here let me say that if or when a cat is seriously ill, its recovery will largely depend upon the nursing it receives; an all-night vigil and attention on the part of an owner has saved the life of many a valuable animal and a well-loved pet, but let us not dwell upon disease—too much is talked about this bogey. House well, feed well, take normal precaution, deal with trouble immediately when it arises, and, in the words of a famous writer, " talk health ".

In breeding a definite plan should be followed if the production of good progeny is to be accomplished. Selective breeding from stock of sound Short-hair ancestry, with care in the elimination of bad points and the inclusion and retention of good ones, colour with like colour wherever possible (except in the case of Tortoiseshells, q.v.) and never the crossing with Long-hairs or foreign Short-hairs is the golden rule.

And for the benefit of novice breeders and owners I would like to intersperse two remarks. Do not hesitate to get the advice of those with experience. They are only too willing and ready to help, and timely assistance will often save many a pitfall. Then do exhibit! If real progress is to be made our stock must be shown; for this purpose select those cats or kittens most nearly approaching the standard and avoid glaring faults, e.g. a bunch of white hairs on a Black cat. Then prepare your exhibits well, groom with brush and hand and give special attention to the ears, and do not leave doing all this until two or three days before the show. Three weeks' intensive grooming is not too much, as this allows time gradually to work up the coat to the

desired condition. Read your schedule carefully, follow the instructions and obey the rules, visit the show yourself, learn where one cat fails and another excels. Do not be disappointed if you do not always win, and never grumble at the judges' awards.

With regard to the varieties of British Short-hairs, all follow the general type as already described, the difference of the breeds being in colour markings (or their absence) and eyes.

The following is the Standard of Points drawn up by the Short-haired Cat Society of Great Britain and applies to all British Short-hairs except Manx (q.v.).

Body and Tail : Well knit and powerful, showing good depth of body. Chest full and broad. Tail thick at base, short rather than long, tapering towards point, carried almost level with back.

Legs and Feet : Legs of good substance and in proportion to the body. Feet neat and well rounded.

Head and Neck : Head broad between the ears ; cheeks well developed ; face and nose short.

Ears : Small, slightly round at tops, not large at base.

Coat : Short, fine and close.

Condition : Hard and muscular, giving a general appearance of activity.

SCALE OF POINTS

Body and Tail	10
Legs and Feet	5
Head and Neck	10
Ears	10
Coat	10
Condition	5

In the above table it will be seen that only 50 points are allotted. Of the remaining 50, 25 are allocated for colour and 25 for eyes in the Blacks, Whites and Blues, 35 for colour and 15 for eyes in the Creams, the whole 50 for colour in the Torties and Tortie and Whites, and the whole 50 for markings in the Tabbies.

A word of warning in studying the foregoing scale. It must not be thought by exhibitors that because 5 points only are allotted for condition, this is therefore a matter of secondary importance ; it is entirely the reverse. It is of primary consideration. A cat that is not in good form is handicapped from the start ; he will never do credit to himself or his owner and he will simply lose prizes.

[Selfs]

Blacks

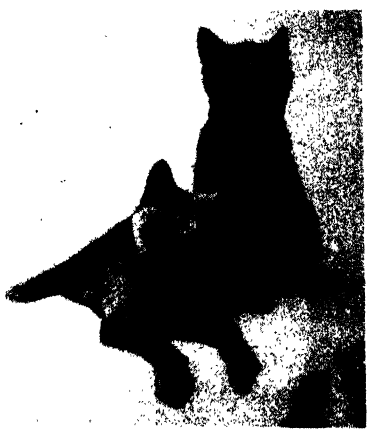
How popular are black cats—perhaps because of their traditional good luck—and how numerous they are ; but green eyes and flecks of white so often detract from the beauty of these household pets. The true-bred Black is an exceedingly handsome animal with its glossy and jet coat. This must be intense and black to the roots and without any trace of rustiness or white hair. The eyes must be round and well open and of a deep copper or orange colour. Eyes have been a weak point in the Blacks, and breeders must concentrate in this direction.

Whites

There are, comparatively speaking, few Whites to be seen either in the home or in the show pen. It may be that the problem of keeping the coat spotless is a deterrent to their popularity, but this should not be so, and it is difficult to understand why this most attractive breed has not more admirers. The coat must be pure white without any tinge of yellow, and the eyes of a deep sapphire blue.

Blues

The British Blue has been described as one of the aristocrats of the short-hairs ; opinions may differ, but the fact remains that it is a most striking and lovely variety, and if more largely bred, and bred well, would attract countless admirers. The tendency to cross the Russian with the British has at times spoilt the breed and given the wedge-shaped head and greeny eye, while the practice of crossing with the long-haired Blue in order to obtain good eye colour has resulted in a too long coat ; both proceedings must be condemned.



BRITISH BLUES
TWO CORYTON CATS

In the true British Blue the colour should be light to medium in shade, very level and without any tabby markings or shadings or traces of white. The eyes should be large and full and of copper, orange or yellow ; the deeper the better.

This breed is worthy of much attention as it is becoming increasingly popular.

Creams

Years ago there were Creams in plenty, but today they are a rare variety. Perhaps one or two appear occasionally at a show —usually the progeny of a Tortie queen—and these attract such public interest as to suggest they are a novelty. The Cream is a beautiful breed of a rich cream colour which must be sound throughout, very level and free from bars, and without any sign of white. The eyes should be copper or hazel. Kittens of this breed are often seen unmarked and seem to promise well, but as development advances markings too often appear. Purchasers of kittens must be prepared to take some risk.

[Tabbies]

Brown Tabbies

The outstanding feature of this breed is, as in all the Tabbies, the markings. These must be as clear as possible and well defined, distinct from the ground colour and not mixed with it. Any blurring or blending is a fault and detracts from a show specimen. In the case of the Browns the ground colour should be rich sable or brown, uniform throughout, no white anywhere. The markings should be very dense and black and the eyes hazel, deep yellow or green.

Red Tabbies

Under this heading are to be seen cats commonly called " ginger " and " sandy " but the real Red—one of the most handsome of the British Short-hairs—should be of a much deeper shade, with ground colour as rich red as possible and with very dense and dark red markings.

In the case of this variety, the fact that both the ground coat and markings are of different shades of the same colour calls for special care that the markings show up well, otherwise the Tabby characteristic is lost and we have a shaded red.



SHORT-HAIR RED TABBY
CH. TUDOR WENCH OF CORYTON

Silver Tabbies

It is not easy to breed a really good Silver Tabby, and hence such specimens are rare, but when one is seen it is a veritable joy to behold. Interest appears to be growing in this breed, and before long Silvers should occupy a prominent place in the show pen. More breeders are, however, needed to take up and work at this variety.

The ground colour of the coat is pure silver, uniform throughout, no white anywhere ; the markings are dense black, again not mixed with the ground colour and clear cut from it, while the eyes, which must be round and well open, are green.

[Tortoiseshells]

Tortoiseshells

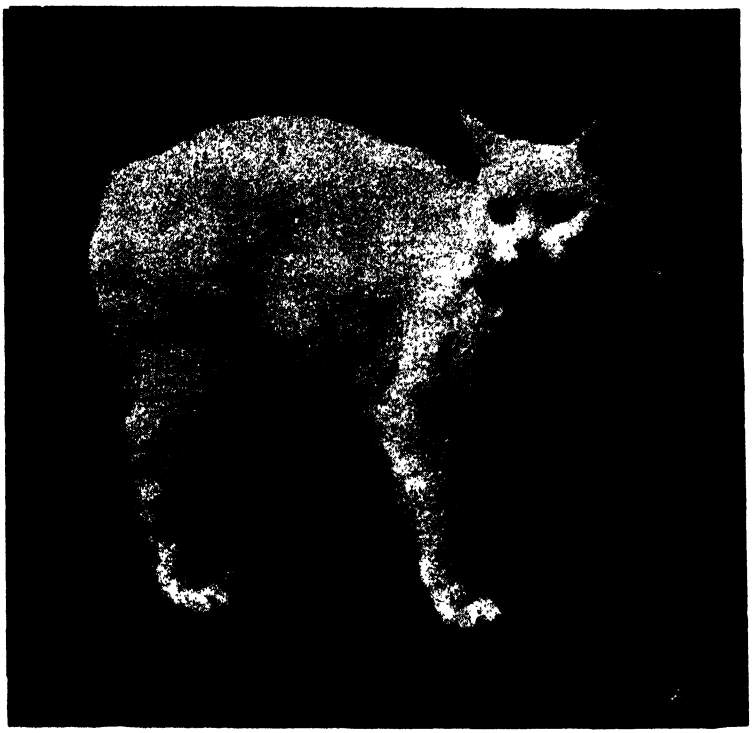
There seems to be a particular fascination about Torties—at present one of Nature's mysteries—for there is no male Tortoiseshell. Male kittens are very occasionally born, but they are infertile, and no reliable evidence can be found for a Tortoiseshell male having sired. The Torties, however, apart from being extremely handsome in themselves, are a good breeding proposition ; there being no male the queen must be mated to a self stud of one of the colours appearing in her coat, and the resultant litter usually consists of various selfs with an occasional Tortoiseshell, though like matings do not always produce like results, but it should be noted that kittens so bred from a stud that himself is pure-bred are themselves pure and breed true ; many a winner and stud has been so produced. At the National Show in 1936 four kittens of a Tortie litter—two Creams, one Blue and one Black, bred by the writer from Champion Chatelaine of Coryton, figured in the prize list, one, the Black, Sylvan Twinkle, being Best British Kitten, a title she improved two years later at the same show as Best British Cat, having previously won her championship at Southsea.

As regards the coat of the Tortoiseshell, this should consist of black and red (light and dark), equally balanced, and each colour as brilliant as possible ; no white. Patches to be clear and defined, no blurring and no tabby or brindle markings. Legs, feet, tail and ears to be as well patched as body and head. Red blaze desirable. The eyes should be orange, copper or hazel.

Tortoiseshell and White

Here the colour should be black and red (dark and light) on white, equally balanced. Colours brilliant and absolutely free

from brindling or tabby markings. The tricolour patchings should cover the top of the head, ears and cheeks, back, tail and part of flanks. White blaze is desirable. White must never predominate—rather the reverse ; eyes should be orange, copper or hazel.



MANX

CH. CHELSEA VILLISH MONA VEEN

[Manx]

So far no mention has been made of that most fascinating breed, the Manx, now regarded as one of the British Shorthairs. Members of this variety are very affectionate and extremely intelligent ; they also live well together and make pets for the home.

In appearance the head is round and large, but not of the snubby type. The nose is longish, but the cheeks are very prominent and thus do away with any suggestion of snipyness, which is a bad fault. The ears are rather wide at base and taper



Photo : T. H. Everitt

MANX

CH. KATZENJAMMER'S GHOST OF CADEMUIR

slightly to a point. Tail-lessness is, of course, the outstanding characteristic of the Manx, and this tail-lessness must be absolute, with a decided hollow at the end of the backbone where in the ordinary cat the tail would commence. Other outstanding features are the hindquarters, which must be exceptionally high, and the back, which must be exceptionally short ; depth of flank is also essential with roundness of rump—as round as an orange if possible. All are necessary in the perfect show specimen, and produce the peculiar hopping gait which is of primary importance.

The coat is termed " double "—that is, it is open and soft like that of a rabbit with another thick and soft undercoat. All colours in Manx are recognized, but together with markings, are to be regarded as of secondary importance ; this also applies to eye colour, but which should follow the lines of other British Short-hairs. Colour, markings and eyes are only taken into consideration where structural points are equal.

The Scale of Points, which naturally differs from other Short-hairs, is as follows :

Tail-lessness	15
Height of Hindquarters	15
Shortness of Back	15
Roundness of Rump	10
Depth of Flank	10
Double Coat	10
Head and Ears	10
Colour and Markings	5
Eyes	5
Condition	5
	100

(Grateful acknowledgement is made to the Editor of " Fur and Feather " for permission to quote from articles and notes by the writer which have appeared in that publication.)

Bronchitis

See Diseases of the Chest.

Brood Queen

See Pregnant Queen.

Brown Tabby Persians



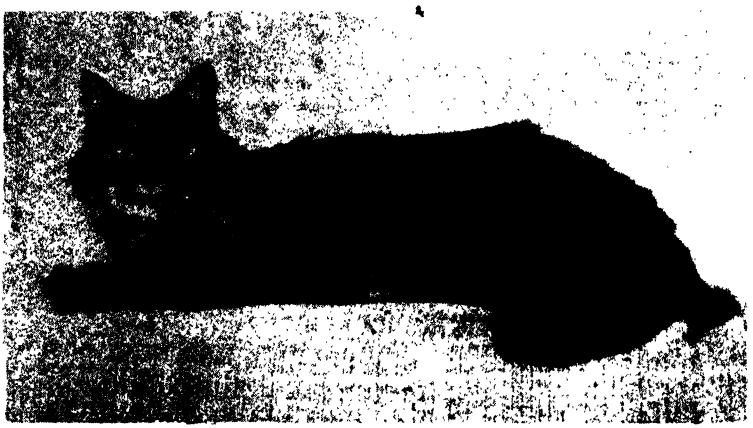
BROWN TABBY
CH. TRELYSTAN GARNET

During the war of 1914–18 the Brown Tabby almost disappeared. It has been said that its popularity was lost because it was felt that this was a variety in which faking was not only possible but was sometimes probable. Whether this is true or not is of little importance, but the fact remains that in the early twenties there were few Brown Tabbies, and the quality of most of these was poor. In the early days of the century it had been quite possible for cats of this variety to win Best in Show, but after the First World War other varieties had made progress while the Browns had deteriorated. Since that time the quality of the

breed has steadily improved, but its popularity has never returned. Today only two breeders advertise males at public stud.

Enthusiasm may return, and, if it does, new breeders will find that the faithful few who have kept the breed alive during the last twenty years have brought about improvements which were at one time considered to be almost impossible.

For many years a white chin, which was regarded as a definite fault, was nevertheless no bar to a win on the show bench, for there were few, if any, Brown Tabbies with brown chins. Today the brown chin has arrived, and although in some cases it is not as dark as the general ground colour, a few cats are almost perfect in this particular quality.



BROWN TABBY
E.E.

Eyes also have shown a marked improvement, and the green eye which was quite common some years ago, even among winners, has now been replaced by the standard hazel or orange.

The Brown Tabby, although lacking some of that type possessed by the best Blues, is an animal of striking appearance. The ground colour should be a rich tawny sable, and on this are the black pencillings and markings that make up the tabby pattern. Such markings must be definitely black, and those specimens which show markings of a greyish tinge should be discarded. A jet black, which is always difficult to get, can be easily lost unless the most careful attention is paid to this factor in choosing the breeding stock.

In the early days of Brown Tabbies it was difficult to find a suitable outcross, as by doing so one would probably have lost type. At the present time the position is somewhat different.

Blacks today are of good type, and a cross with a Black might well improve the markings of the Brown. Improvements of this order, however, must not be expected in the first generation.

Breeders in the past, when making such crosses, used to discard the males and mate the females back to the original variety. Much more satisfactory results might probably follow the mating of a brother and sister of this F.1 generation. This is inbreeding of the closest kind and certainly should not be continued.

Cross-mating with a Red Tabby, which is sometimes advocated, cannot be recommended as nothing is likely to be gained in type, and it is difficult to see how colour can be improved. On the other hand, a cross with a Blue would almost certainly improve type, while the blue (which is a dilute black) might nevertheless adversely affect colour for several generations.

It is not easy to choose from a litter of kittens the one most likely to be outstanding as an adult, but usually depth of colour is present at an early age if it is going to be present at all. Markings are not well defined in kittens, and some months must elapse before their distinctness is final, but it must be remembered that a solid black back in a kitten may later show only distinct stripes of black. Even with an apparently solid black back, however, the tabby markings can be faintly seen in certain lights.

(*This section was written from notes supplied by Miss J. M. Fisher, whose allegiance to the Brown Tabby has never wavered.*)

OFFICIAL STANDARD

Colour and Markings : Rich tawny sable, with delicate black pencillings running down face. The cheeks crossed with two or three distincts whorls. The chest crossed by two unbroken narrow lines, butterfly markings on shoulders. Front of legs striped regularly from toes upwards. The saddle and sides to have deep bands running down them, and the tail to be regularly ringed.

Coat : Long and flowing, tail short and full.

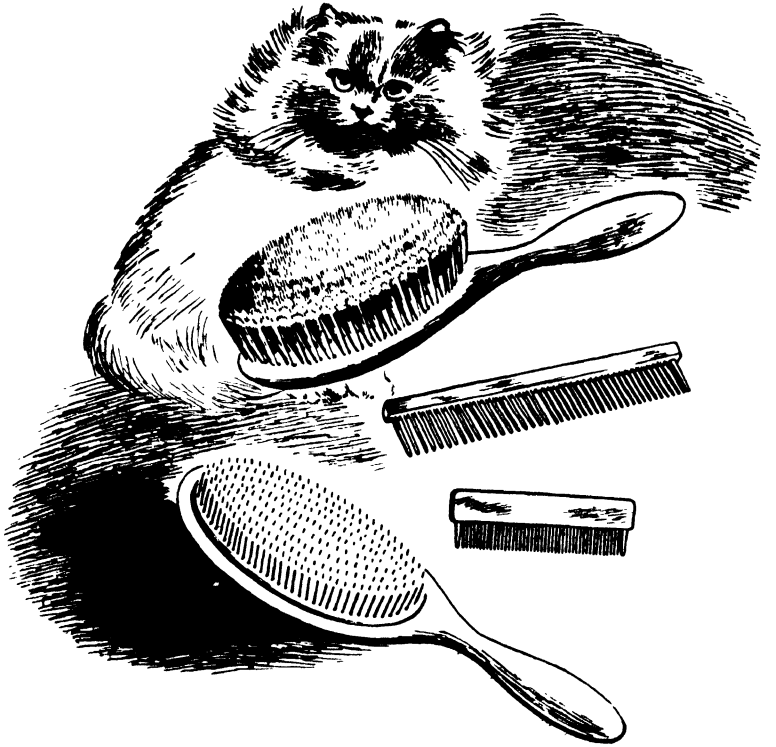
Body : Cobby and massive, short legs.

Head : Round and broad, small, well-placed and well-tufted ears, short broad nose, full round cheeks.

Eyes : Large and round, hazel or copper colour.

SCALE OF POINTS

Coat	50
Body	15
Head	20
Eyes	15
	100



BRUSHES AND COMBS

Brushing

Brushing should form part of the daily toilet of all cats, whether long-haired or short. Long-hairs need constant attention from the brush if coats are not to become tangled and matted, but at the same time the friction produced by brushing is also very valuable in promoting the health of the skin. The comb also has its part to play in the daily routine, but it is the brush which serves this double purpose.

When brushing the coat always carry out part of this operation in the direction of the head ; that is against the lie of the coat, for in this way one can get down to the undercoat and much of the loose hair will be removed.

Never try to include too much hair with each sweep of the brush, but rather brush with an upward sweep so that the fur is opened to the roots in as many places as possible.

Many breeders recommend the use of a wire brush, but in the hands of the inexperienced this may be dangerous, for not only will dead hair be removed, but the enthusiastic novice may also tear out much of the live coat. Brushing, when skilfully done, can greatly improve the appearance of the coat, but a few weeks of careless brushing and the coat will present a very ragged appearance.

Stiff bristles are essential, but a brush with close bristles is not the best to use. After a little experimenting the novice will usually find that the brush in which the bristles are fixed in a rubber pad produces the best result, and within reason the smaller the brush the better the results.

This subject will be mentioned again under the heading of Grooming.

Burns

It is not an uncommon accident for a cat to get burned by dry heat or to be scalded by some hot liquid. In either case prompt treatment is of the greatest importance as injuries caused by burning produce considerable pain.

It is a very common accident for a cat to burn its pads through jumping on some hot object, such as the top of a kitchen range, on which at other times it has been used to walking without suffering harm. The burn should be treated with vaseline, which is by far the safest substance to use. The foot should then be bound up to keep the air away from the sore, and also to prevent the possibility of infection if there is an open wound. Healing will be quite rapid, but some difficulty is usually experienced in trying to keep the dressing on the foot. Until it is clear that healing is almost complete, the animal should be closely confined.

Unless the cat comes into actual contact with flames, it is rare for other parts of the body to be burned, as the coat acts as a partial protection. When, however, extensive burning does occur, it is useless to attempt to deal with this unaided, as the help of a vet. will certainly be needed. The consequences of serious burns extend beyond the actual damage done to flesh, and shock is here perhaps the greatest danger.

Cats sometimes walk in acid which has been spilled from accumulators, and this can produce very painful burning of the skin. If acid is known to be the cause of the burn, the affected part should be bathed with an alkali solution. Half a teaspoonful of washing soda to a teacup of warm water will make a solution of adequate strength. On the other hand, if the burn is caused by a corrosive alkali, the bathing solution must be acid, and

can be just neat vinegar. As in all cases of burns, the wound caused should be protected from the air.

Scalding may produce very serious injuries, but it is very rare for this accident to happen. Occasionally, however, boiling water or fat is spilled over a cat, and when this happens the affected part should be well covered with a dressing of vaseline. There is very little more that one can do and often healing is rapid. The new fur which grows on the burned patch is likely to be different in colour from the rest of the coat; often it is pure white.

Butt-ended Kitten

It sometimes happens that a kitten which has passed down one horn of the uterus becomes lodged when it reaches the pubic bone. Somehow the kitten's head, instead of passing into the vagina and thus out of the mother's body, is turned forward so that it presses down on to its own chest. When this happens there is nothing that the queen can do to produce the kitten, for the greater the effort she makes the worse the situation becomes. On the other hand, there is nothing that the owner can do either, for here is a case for a veterinary surgeon experienced with cats.

It is comparatively rarely that one meets this misfortune, but when a queen has laboured for two hours and is obviously making no progress although she is becoming exhausted, the time has definitely arrived to seek expert advice.

There is little or no hope that the vet. will be able to save the life of this kitten, but there is every hope that any other kittens will be produced alive. Delay in dealing with a misplacement of this type is also dangerous to the queen. (*See Cæsarian Birth.*)

Buying a Kitten

The usual and cheapest way to start cat keeping is by purchasing a kitten, but it must be understood that although this method may be cheapest in first cost it is not necessarily so in the long run, for not all kittens will reach maturity.

The usual age for buying a kitten is round about eight weeks, but if the complete novice can persuade the breeder to keep the animal for a few weeks longer, that is a very wise plan to adopt.

At eight weeks a kitten should be completely weaned, but small breeders may find it difficult to keep the mother and kittens apart for any length of time before the family is sold.

Thus it is quite possible that the kitten is feeding from its mother right up to the time of sale. This is a definite disadvantage, for the purchaser must try to carry on with the diet to which the small animal has been accustomed. With an unweaned kitten this is impossible and may lead to unhappy consequences. In any case the changes brought about by a new home are sufficient in themselves without the immediate separation from the mother being added to them.



BLUE
SPEEDWELL BRIAN BORU

One must first of all decide what variety one wishes to keep. Perhaps the short sections on the various varieties given in this book may help in making that decision. Actually the choice is more limited than the list of varieties would seem to suggest, for they are not all equally popular, and to find a kitten of some breeds might well take months of search.

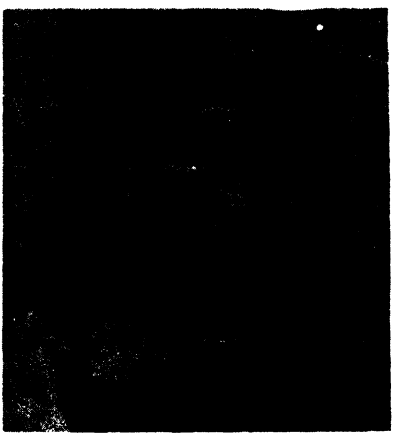
The best time in the year for the complete novice to make his purchase is in spring. When summer is ahead that is the easiest time to rear a kitten. Exercise and fresh air in the warmth of a summer sun will do much to compensate for many small faults in management. The risk of chills is, of course, much less at this time of year.

It is certainly wise to see a kitten before the purchase is made, as rarely are breeders prepared to send on approval. On the other hand, the best breeders are usually loath to sell a kitten unless they know something of the purchaser. With most of them it is not merely a case of just receiving so many guineas, but they also want to assure themselves that the kitten will have a good and understanding home.

Whenever possible write in the first instance to a well-known breeder in the variety that you have decided to keep. Even if this breeder has no kittens for sale it is more than likely that he will know of other breeders whom he can recommend and who have litters ready. It is extremely foolish to imagine that every cat advertised is worth buying. There are good and bad breeders in cats as in every other branch of livestock, and it

is not everyone who can rear a litter to eight or ten weeks satisfactorily.

The purchaser must know clearly exactly what he wants to buy. It may be a male kitten to be neutered as a pet, or a female kitten to be used for future breeding, or perhaps a kitten of either sex which it is hoped will acquit itself well on the show bench. Tell the breeder exactly what you want and then there can be no misunderstanding.



CREAM
SPEEDWELL KREEMY GEM

A male kitten required for a pet need only be healthy and pleasant to the eye, and one might expect to be able to purchase it for as little as six guineas, whereas another specimen showing signs of undoubted quality and likely to develop into a successful show cat might well command twice that price.

When one purchases a female with the idea of breeding, one question always to ask is the number of kittens in the litter. A queen who produces ones or twos in each litter is likely to pass on this low fertility to her offspring. If no one ever bought a kitten from a litter of less than four, cats which are bad breeders would disappear in the space of two or three generations.

When you go to see the kitten make quite certain that you look for the points you want to see, and be equally certain that the troubles you do not want to buy are not present.

A kitten at ten weeks should be extremely active and full of mischief. If the kitten you are inspecting is languid and inactive ask the reason for this. If the answer is that the kitten has been a bit off colour for a few days, obviously that is not the one for you to buy. If, on the other hand, it has just eaten a heavy meal, all is well, for all self-respecting animals show a wise but marked disinclination for exercise when their stomachs are full.

A long-haired kitten of ten weeks should weigh at least 2½ lb., and if a Blue probably a little more than this. In any case 2½ lb. should be regarded as a satisfactory minimum for the long-hairs, while Siamese and most short-hairs will be as much as half a pound less. An undergrown kitten is not an advisable purchase.

Carefully examine the back parts to see that there are no traces of diarrhœa. This complaint is not uncommon with young kittens, but the novice certainly does not want to buy this trouble, as it is not easy to cure.

Ears should also be inspected to see if there are any signs of canker. The brown crust characteristic of this ear affection is unmistakable, and although it is not very difficult to cure, one naturally does not want to start off with an animal which needs this sort of treatment from the outset.

Most long-haired cats have fleas from time to time, but one does not want to take home a kitten that is infested with them. Fleas leave clear signs of their presence in the undercoat, and a brief examination will give one a good idea of the position. There is no need to bother about one or two, but if the kitten seems to be alive with them it is wiser not to make a purchase.



BLUE
GLENSHEE GLORIA

This may all seem a lot of trouble to take, but it is far better to be satisfied before the kitten is taken away than to write to complain to the breeder afterwards.

Having bought the kitten the next task is to convey it home ! This is so obvious that its mention would seem unnecessary were it not for the fact that some buyers seem not to have thought of the return journey.

Always go prepared with a suitable box or basket in which to carry the kitten. A shopping basket is not a suitable carrier, nor is it wise to hold the animal inside one's coat with its head just poking out. The sights and sounds of a first journey may cause a serious mental upset, and it is at least prudent to cut out the sights.

It is also a good plan to purchase a kitten when you are sure to have some spare time in which you can help it to settle down in a new home. The understanding owner will realize the many new adjustments that the kitten will be called upon to make, and will see that it is helped as much as possible. Such time will be time well spent.

C

Cæsarian Birth

When, as sometimes happens, a queen finds it impossible to produce the first kitten of her litter, the services of the vet. must be sought before the cat becomes exhausted. The cause of the trouble is often that the head of the kitten has become turned under, and no amount of straining will give birth to this kitten.

In the case of the dog the vet. can usually manipulate the head until it is turned into a normal position, but the cat is so much smaller that the surgeon has no room in which to work. He may be able to bring away the kitten in sections by the use of forceps, but unless the muscles of these parts are relaxed even that is impossible, and a Cæsarian section becomes imperative.

If the first kitten can be produced by forceps that is by far the best solution, for then all the remaining kittens of the litter may be produced normally. If the litter is produced by Cæsarian section there is a very strong possibility that all will be dead, as it is only natural that there should be some hours' delay before so drastic a remedy can be applied.

Should the kittens be produced alive, an attempt should be made to rear them by the use of a foster mother. The queen herself will rarely be interested in such kittens, nor will her condition be good enough for her to attempt this task. Probably with cats it is but rarely that a litter produced in this fashion is reared.

The queen will need very careful attention for a few days, but if she survives the first forty-eight hours, during which period there is a very serious danger of peritonitis setting in, her chances of recovery are definitely good. A light diet and warmth should see the animal almost normal by the time the stitches are removed about the tenth day.

Occasionally a stitch abscess may appear, but this should cause little trouble.

When an operation such as this is necessary, the surgeon should be asked to spay the female if there is the slightest sign of internal abnormality which might produce the same difficulty with future litters.

Naturally a queen who has had to undergo this operation should be allowed a long rest before she is again used as a breeder.

One should make a careful note of the side of the body on which the incision was made, because no further operation must be performed on this side, as scar tissue which is formed after an operation will not heal if again cut.

If a second litter has to be produced in the same way, the breeder should not hesitate to have the queen spayed, as she is without doubt useless as a breeder.

Calcium

See Rickets and Vitamins.

Cancer

Unfortunately cats are liable in later life to develop cancer, although happily deaths from this cause are very few.

Among cats that are getting old one sometimes finds one that is obviously ailing and yet shows no recognizable symptoms of specific disease. When loss of condition, and at the same time loss of flesh, is progressive, and one is unable to find remedies which produce improvement, cancer must always be suspected. Such diagnosis might be confirmed by X-ray.

Wherever there is mucous membrane the possibility of cancer always exists. In the early stages of this disease there is probably little pain or even inconvenience, but later a cat may show the discomfort it feels by licking or biting at some part of its body where on the surface nothing unusual can be seen. A persistently ailing cat should always be seen by a vet., and no amateur should expect to be able to diagnose diseases of this kind.

No more need be said here on this subject, for if ever one has the misfortune to find an old feline friend suffering from cancer, a merciful end is the only possible solution.

Canker

Quite often this term is carelessly used to denote almost any inflammatory condition of the ear, and as a result of this very amateur diagnosis cures are attempted which are not suitable to the case.

For the sake of safety the name should only be applied to that ear condition which results from its infestation by a definite parasite. Although other abnormal conditions of the ear will be dealt with elsewhere, here attention will be confined to the removal of these irritating parasites and the prevention of their return.

It should be a rule observed by all cat owners that the ears should be examined at least once a week, for with canker, as with most ailments, early treatment is much more likely to effect a rapid and permanent cure. Unfortunately these routine tasks are so often neglected, and nothing is done until the symptoms of trouble are obvious and attention an urgent necessity.

The parasites set up an intense irritation, and the cat is constantly scratching in a vain attempt to obtain relief. This goes on day after day, and some owners console themselves with the fact that the animal must be harbouring fleas. A few days of violent scratching, however, and the hair round the base of the ear will have been removed, and probably an open wound will have been made by the creature's sharp claws.

An inspection of the ear will almost certainly show that the ear channel is inflamed and dirty. Usually a brown crust can be seen, and if part of this is removed and inspected under a low-powered magnifying glass, the insects that are causing the irritation can be plainly seen. This would obviously be a definite case of parasitic ear canker.

Obtaining a cure is a tedious business, but must be regarded as a just penalty for previous neglect.

The first step in the treatment is to have ready all the things which will be required, for usually one has to perform the task single-handed, and considerable time is wasted when one is compelled to release the cat from time to time in order to fetch some other article that is needed.

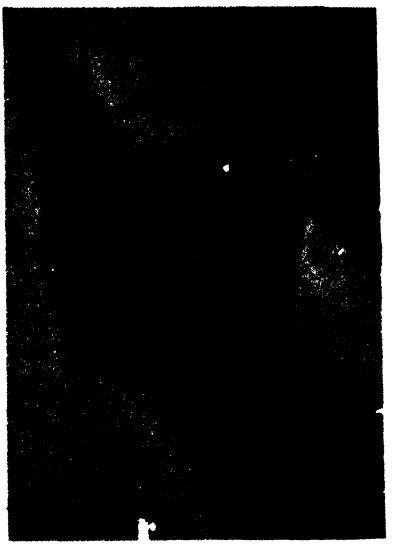
Requirements are quite simple, with one exception, and can be found in most ordinary households. They are a towel, cotton wool, olive oil or a substitute, orange sticks, a small empty tin and a bottle of canker lotion.

Wrap the cat up firmly in the towel so that both fore and back legs are completely controlled. The towel should be wrapped in such a way that the animal can be held by grasping the towel where it is brought round the neck. These preliminary precautions are very necessary as it is quite impossible to treat a violently struggling cat. The ear is sensitive to the touch, and such interference is naturally resented.

Warm half a teaspoonful of olive oil and pour slowly into the ear. If the bottle containing the oil is stood in a bowl containing hot water it will soon reach a comfortable temperature. Once the oil has been put in, gently massage the base of the ear as this will ensure equal distribution, and bring the oil into contact with the crusts or scabs which one desires to loosen. The cat must be held quite still while this is being done or much of the oil will get

on the fur. In addition to making an unsightly mess of the fur, little of the oil will be left to soften the crusts.

After the oil has been in a few minutes one can attempt to remove these crusts. Take a small piece of cotton wool and wrap it round an orange stick. Now carefully start to probe in the ear. One must do this carefully, because one must avoid breaking the skin and thus causing bleeding.



S.P. SIAMESE
PRESTWICK PUJI

In a short time the pledget of cotton wool will have collected a dark brown, crumbly substance which has been a result of the parasites and a further cause of irritation. Never put back into the ear a dirty piece of wool, but take it off the stick and put it in the empty tin. Great care must be taken in this respect as canker is highly contagious, and it is very simple to pass it on to cats which at the moment are not affected. The ear should be carefully cleaned in this way until practically all the oil has been removed. To finish this first treatment of the ear pour in a small quantity of canker lotion, and then massage the base of the ear as was done when the oil was introduced.

Attention must now be turned to the other ear, which will most probably be found to be in the same condition. Although both ears are usually affected, one is often much worse than the other.

In acute cases of this ear trouble treatment should be given twice a day. When one comes to the second treatment it is usual to find that the lotion has loosened quite large pieces of the crust, which have now come into view and can be removed very easily.

It is impossible to say how long treatment will have to be given before the cure is complete, because so much depends on how long the ear was left before a cure was started. Severe cases may require constant attention for as long as three weeks. By this

time the breeder will be convinced that prevention is far better than cure.

If other cats are kept they should certainly be examined, and even if no trouble is found the ears should be dusted with canker powder. It is not always possible to isolate the victim, but where this can be done there is much less danger of any other animals becoming infected. All dirty cotton wool must always be burned, for that is the only safe way of destroying the parasites.

Undoubtedly there are many other substances than some proprietary brand of canker lotion which could be used, but if this method is found to be satisfactory there is little value in further experiment.

Hydrogen peroxide is sometimes used, but if use is continuous for any length of time the naturally sensitive membrane of the ear may become even more sensitive and irritable. Some breeders make use of T.C.P. and boracic powder, but, as has been said already, one satisfactory method of treatment is usually sufficient.

For a few minutes after each treatment the cat may want to scratch even more than before, but if it is gently restrained the discomfort will soon disappear and the animal will appear comfortable again.

Neglect of an acute case may lead to serious consequences with symptoms which are most alarming. Occasionally an abscess forms deep inside the ear. The cat is obviously in great pain, and when it gets out of its box and tries to walk it sometimes falls over on its side as if paralysed. Rarely does this form of paralysis become chronic, but if it does there is only one possible ending to this story of neglect.

Capsules

The giving of medicine to a cat can be very difficult unless the dose is in the form of a tablet, but one can accomplish the task quite easily also if a capsule is used.

These capsules are made of gelatine and will dissolve quite readily in the stomach, thus releasing the medicine with which the capsule has been filled. They can be obtained in seven different sizes, ranging from " ooo ", the largest, to No. 4, the smallest. The largest size will hold nearly $1\frac{1}{2}$ gm. of bicarbonate of soda, while the smallest will contain less than $\frac{1}{5}$ gm. For all practical purposes the cat breeder will only need the four largest sizes, and of these No. 1 will easily be found the most useful.

Each capsule consists of two parts—a container, and a cover which is a little shorter in length than the section holding the medicine. This lid which overlaps the container to nearly half

its length is thus large enough to prevent any possibility of the two parts separating and thus allowing the medicine to be spilled.

The container should be well filled, and then the lid must be pressed on firmly. After this it is only a matter of seconds to open the cat's mouth and to push the capsule over the back of the tongue. All powders can be given in this way, and the largest size can often be used for liquids. To dissolve quickly gelatine needs moisture and warmth, and as most medicines are cold, there is plenty of time to give the capsule before the case collapses. It is always a good plan to give liquid paraffin to long-haired cats in a capsule, for few of them take it willingly, and in the ensuing struggle some may get on the coat and make it unsightly for days.

Certainly if you have not tried this method of administering medicine it is well worth a trial. (*See Administering Medicine.*)

Carbohydrates

See Feeding.

Carbolic

See Poisoning.

Cardboard Collars

It is sometimes necessary to prevent a cat from scratching its ears and head, and this is quite a difficult problem. When, however, the animal has a wound on the head the irritation caused by healing often makes the cat scratch incessantly, with the result that a scab no sooner forms than it is removed. In a case such as this, or when one is particularly anxious that the ears should not be scratched, a cardboard collar must be made.

Take a piece of firm cardboard and cut out a circle about 12 inches in diameter, and then from the centre of this circle cut out another of about 3 inches in diameter. Then cut from the inside circle to the outside edge so that one has a split ring of cardboard with a width of about 4 to 5 inches. This should now be placed over the cat's head so that it fits as near behind the ears as possible. It is quite useless if the collar falls far back on the shoulders. The two ends of the ring are tied together with a small length of tape. If the collar is not tight enough the length of the ring can be shortened by cutting away a piece of the card. When fitted, this collar may adopt a funnel shape, but this will be no disadvantage if the funnel faces forward.

Most cats seem very self-conscious about the collar when wearing it for the first time, but after a few unsuccessful attempts to

remove it they usually accept it without further protest. There is no need to remove it at night, as the animal soon finds that it can lie down quite comfortably with its collar in position.

Carrots

See Feeding and Vitamins.

Castration

If a male is to be kept merely as a pet he should certainly be castrated. An entire male is not a house cat, as he has an unpleasant habit of "spraying" over the floors and furniture. The smell thus caused is most unpleasant and cannot be tolerated. For this reason, among others, the entire male must live in quarters of his own.

Certainly a male which is not to be used for breeding should be neutered before he reaches the stage of sexual maturity, for after this operation his life will be much happier. He is also more likely to remain a house cat, as he will not develop a desire to range the countryside in search of mates.

Although castration is a perfectly simple operation it is not one which should be attempted by the breeder, but must be performed by a qualified vet. The few shillings which might be saved by performing the operation oneself would be no excuse for the possible mutilation of the cat. These remarks are necessary as there are still amateurs who attempt this operation.

Until the cat is about three months old the testicles do not descend from the abdomen, and thus the operation cannot be performed before this age is reached. The most suitable age is between four and six months. If it has not been performed before the end of the six months the law demands that an anæsthetic shall be given.

It is extremely rare for any complications to follow the removal of the testicles, and in most cases the animal seems to suffer neither discomfort nor distress, but eats and plays quite normally at once.

Catarrh

Nasal catarrh, which is merely the result of a cold in the head, is comparatively common with cats. They catch cold quite easily, and for several days display all those symptoms which are characteristic of a head cold in a human. There is frequent sneezing, and the cat usually runs from both eyes and nose. This discharge is watery and has no offensive smell. As the condition is highly infectious, the victim should be isolated, but even so it is more than likely that many, if not all, the cats in the establish-

ment will in a few days develop the same symptoms. The reason for this is that the damage is usually done before the symptoms are recognized in the first victim of the complaint.

This condition is not serious and need cause no undue anxiety, but a cat with a cold must not be neglected, for when this happens serious consequences may follow. The animal should be kept in a room which is warm and in which there are no wide fluctuations in temperature, but at the same time an abundance of fresh air is essential. With all head colds the inflammation of the mucous membranes usually impedes breathing, and frequently the nasal passages become blocked. A cat that is compelled to become a mouth breather is usually distressed, and will shake its head as it coughs and sneezes in an attempt to clear the nose. An inhalation of Friar's Balsam may provide immediate relief. A jug of boiling water with the balsam added should be placed outside the box or basket, and then the bed and jug can be covered with a big towel. This treatment is likely to produce a considerable alleviation of the symptoms. Care must be taken to see that the cat does not upset the boiling water.

Relief may also be provided by syringing the nostrils with medicated oils such as Mistol. The dropper supplied is too wide for insertion into the cat's nostrils, and a fountain-pen filler may be found more useful. One must be careful to see that the glass end of the filler is perfectly smooth. If there is much discharge from the eyes these should be carefully wiped with cotton wool dipped in a weak solution of boracic.

A head cold which receives proper treatment usually clears up in three or four days, but if neglected pneumonia may follow. A neglected cold may also leave behind catarrh, which in time becomes chronic.

Chronic catarrh is known as " snuffles ", a name descriptive of the audible symptoms. The cat frequently sneezes, and as it does so discharges from the nose an unpleasant greenish-yellow mucous which is at times almost solid. Even when not actually sneezing, the animal breathes heavily through its nose, and from time to time snorts in an attempt to disperse the collected mucous. It is a most distressing complaint, as the unpleasant discharge is frequently sprayed all over the room by the violence of the sneezing.

To effect a cure is a long and difficult matter, for the nose must be sprayed several times each day for a period perhaps as long as three or four months. Perseverance is, however, essential or sinus or antrim trouble, or perhaps both, may follow. Such conditions would make surgical attention advisable.

It is possible that in the near future breeders may be able to give the cat injections to combat this chronic condition. If this is the case a much quicker cure can be expected.

When the sense of smell is impaired, appetite is usually fastidious, but generally speaking, with both the common cold and snuffles, most cats eat quite well. This is most important, for maintenance of general condition is of great value when a cure is being attempted.

Catheter

See Bladder Troubles.

Catmint

See Scratching Log.

Cats and Dogs

Although in ordinary colloquial speech one uses the expression " a cat and dog life " to mean that there is constant friction and quarrelling, this expression must not be taken to imply that cats and dogs cannot get on peacefully together.

What usually happens is that a dog sees a moving object which happens to be a cat. Nothing is more natural than that the dog should chase this moving creature. This increases its speed until it reaches what it considers a haven of refuge well out of the monster's grasp. A cat that has been chased quite naturally does not appreciate the experience, and when a similar encounter seems likely, disappears if possible before it can be seen.

Some dogs are taught to be killers, and in the excitement of the chase fail to recognize the difference between the domestic cat and a rabbit. Consequently a cat is sometimes killed by a dog. One should blame the owner rather than the dog, for a little training would have prevented such a catastrophe. Some dog owners deliberately train their dogs to chase cats, but even so there are few dogs, apart from terriers, which will deliberately kill a cat. Dogs, however, cannot expect always to get off unscathed, and many a dog in an encounter with a cat learns a lesson which may cause him to dislike the whole feline race. For the future he shows less interest in them, and the cat may well be mistress of the field. The extended claws of a cat can inflict severe damage, and many a dog has lost the sight of an eye as the result of his unprovoked attack on a cat. If there is quarrelling it is usually the dog that is to blame in the first instance, although some cats, after a few unhappy experiences, are prepared to attack all dogs whether friendly or otherwise.

Owners of both cats and dogs should make a deliberate effort to see that their pets get on well together. If one is present, as should be the case when the animals meet for the first time, the dog should be held under restraint until one can see how he is going to react. The taking of a little trouble will make for satisfactory relations for the future, and the pair may become the best of friends.

A cat that is brought up with dogs very soon has no fear of them at all, however large they may be. This often means that she has no fear of dogs as a race, and it is only later that she realizes that dogs other than those she knows intimately may be dangerous. Experience, however, is a good teacher, and she soon learns to treat stray dogs with caution until she is sure of their intentions.

Although cats and dogs can get on in friendly fashion together, they are very different in character and temperament. It is useless to say that dogs are much better than cats as companions, for the two really cannot be compared.

The dog that has been reared from its puppy days by one person is unswervingly faithful, and, even despite bad treatment, will willingly turn to lick the hand that ill-treats it. The dog relies upon man and is lost without him. The cat, on the other hand, possesses a much greater independence of spirit. It tolerates man and may even like him, but it is never his slave, willingly or unwillingly. A dog may understand what is expected of it, and if it does will attempt to give satisfaction. The cat, on the other hand, even if it understands, will ultimately please itself. As companions they are entirely different, and if one can manage to keep them both, each in its own way will provide a great deal of pleasure. They will be found to be excellent companions. If one takes the trouble to try to understand their essential differences, then the pleasure is so much the greater.

Cats and the Law (*by Ernest Brassel*)

Although cats have a long history in this country, having been introduced into Britain by the Romans for the protection of barns, they do not figure very prominently in the law. Apart from the general acts dealing with animals, such as the Cruelty to Animals Act, and the Protection of Animals Act, there are no Statutory Laws dealing with cats as there are for dogs (viz. the Dogs Act). Nevertheless, cats have figured in Common Law actions. In one case the plaintiff, a pigeon fancier, brought an action in the County Court against the defendant, a cat owner,

claiming £8 for the loss of thirteen pigeons and two bantams killed by the defendant's cat. There was no evidence of any vice in the cat other than the habit common to all cats of straying and killing birds. Before discussing this case and the responsibilities of the owners of cats for damage done by them, a few introductory remarks will no doubt be helpful to those not familiar with legal terminology.

Obligations arise mainly from either contract or tort, that is, a wrong independent of contract. With contract the duties owed by one party to the other have been fixed by the parties themselves. Thus, for example, if A agrees to sell a pedigree Persian cat to B on certain terms and either A or B fails to carry out the terms of the contract, then the injured party may bring an action for damages for breach of contract. There are, however, duties which all members of a civilized community owe their neighbours. Such duties are general and are not fixed by the parties themselves. A breach of that general duty may lead to a civil action for compensation at the suit of the person who has suffered an infringement of his rights. It is important, therefore, that all should be aware of these duties. That branch of the law which deals with these obligations is the law of tort.

Sir Frederick Pollock, in his classic work on torts, says " a man who fails to take precautions in things within his control against risk to others which he actually foresees, or which a man of common sense and competence would in his place foresee, will scarcely be held blameless by the moral judgment of his fellows. Legal liability for negligence and similar wrongs corresponds approximately to the moral censure on this kind of default." Liability for tort is the result " of wilful injury to others or wanton disregard of what is due to them, or of a failure to observe due care and caution, which has similar, though not intended or expected, consequences ". Torts, or civil wrongs as they may be termed, include trespass to land and to goods, nuisance and negligence.

English law distinguishes between animals *feræ naturæ*, or wild animals, using the term wild in the popular sense, and animals *mansuetæ* or *domitæ naturæ*, which class includes all tame or domestic animals. Lions, tigers, wolves, elephants, monkeys, rabbits, deer, pigeons are all animals *feræ naturæ*, from which it will be seen that this class is not confined to ferocious animals. Animals *mansuetæ* or *domitæ naturæ* comprise all tame and domestic animals such as cats, dogs, horses and cattle, which may nevertheless be addicted to acts harmful to persons or property.

The law of liability for cats requires an understanding of a

special action known as the scienter action, which exists apart from the usual rights of action under the general rules of law concerning trespass, negligence and nuisance. The scienter action is based upon the principle that a man's liability for damage caused by his animal depends upon previous knowledge of its vicious nature. A person who has suffered damage by an animal and seeks redress must establish that the animal had previously committed, or had attempted to commit, a vicious act of the kind complained of, and that the defendant or his servant who had charge of the animal knew of the act and was therefore aware of its vicious tendency. If the plaintiff can establish these two things he can obtain compensation for damage which the animal has committed, either to his person, or to goods or land. At Common Law, apart from negligence, no liability attaches to the owner of a cat for acts which are ordinarily committed by such an animal. Thus it is common experience that a cat and dog will fight, and the owner of a cat will not be liable for damage which his cat does to his neighbour's dog. The owner of a cat is not liable for acts of a vicious or mischievous character which are foreign to its ordinary nature unless he knows that the particular animal possesses a propensity or disposition to commit acts of that unusual character, either generally or under special circumstances. If he knows of this special tendency, he keeps the animal at his peril and will be liable for any harm which may ensue. It should be added that liability does not depend upon ownership ; the person who keeps or controls the animal is responsible. No liability, of course, accrues to the occupier for the acts of an animal which strays upon his premises and which is not encouraged. But if he harbours it or takes no steps to prevent its access he may be regarded as " keeping " the animal.

Return now to the case referred to at the beginning of this section. The County Court judge held that the owner of a cat is not bound to keep it from killing pigeons in a cote or chickens in a chicken run, but that it is up to the owner of the birds to keep them from becoming a prey to prowling cats. The defendant was not therefore liable.

The case was ultimately heard by the Court of Appeal, which upheld the judgment of the County Court judge. A clear statement of the legal aspect was made by Lord Justice Bankes. The decision of the Court may be summarized by saying that the owner of a cat is not bound to keep it from straying into a neighbour's land. The owner is not responsible when his cat trespasses and does damage which merely consists in following a natural propensity of its kind. Generally speaking the owner of an

animal is responsible if it trespasses, but the Common Law admits of an exception in the case of cats and dogs and this is based upon grounds of common sense and public necessity. To make the owner of a cat liable he must have knowledge of some vicious propensity beyond the common instincts of such an animal.

Since it is common experience that cats and dogs will fight, this section would not be complete without reference to liability for the quarrels of " these two inveterate enemies ". Animals acting in self-defence can hardly be regarded as vicious. It would seem that the owner of a cat is not responsible for any damage his cat does to his neighbour's dog, and likewise the owner of the dog is not liable for any damage done by the dog to the cat. This is, of course, a general statement, and does not mean that the owner of an aggressive dog can with impunity take it to a cat show.

Mention was made at the beginning of this section of the Protection of Animals Act. This Act of 1911 consolidates and amends the law relating to cruelty to animals. All domestic animals are within its provisions. In addition to obvious cruelty such as beating, ill-treating, torturing, infuriating or terrifying an animal, it is also an offence to convey an animal in such a manner as to cause it unnecessary suffering, or to administer poison or injurious drugs, or to perform an operation without due care and humanity. There may be cruelty by neglect, as for example where an animal is underfed or kept in insanitary conditions.

In connection with the conveyance of animals it should be noted that railway companies are under a duty to provide food and water for animals carried by rail. They are liable for any injury to animals arising from the neglect or default of their servants, but they are not liable for injuries due to an animal's vice or unruliness, provided a suitable carriage has been supplied. Any person guilty of an offence under this Act is liable to a fine not exceeding £25, or alternatively, or in addition, to imprisonment for a term not exceeding three months.

There is one further point requiring attention in this section. There is a legal process of self-help whereby chattels, including animals, that are doing damage to land may be taken and retained by way of security until compensation is paid. This legal process is known as distress damage feasant. There is, however, no right to sell chattels that have been distrained in this way as there is in the case of distress for rent ; but there is no limit to the time for which they may be held as security.

Catteries

Where more than one or two cats are kept for breeding purposes a special cattery reserved for the use of the animals is essential. Generally speaking it would be wiser for breeders to keep no more stock than can be allowed comparative freedom, but since there are breeders who keep a number of animals, a cattery is essential. Furthermore, when a stud is kept a cat house is always a necessity.



AN INDOOR CATTERY

[Indoor Catteries]

Indoor catteries have little to recommend them, for cats certainly need exercise in the fresh air, and any attempt to disregard this need always produces unfortunate experiences. The cost of building a cat house sufficiently large to allow adequate space for exercise would be prohibitive for the majority of breeders. Sometimes one sees an indoor cattery in which the

animals spend the greater part of their lives in glorified rabbit hutches with an occasional walk round a room far too small for the essential requirements of an active cat. To attempt to breed and rear kittens under such conditions is only to produce stock lacking in stamina, which in time will fall victim to all the ailments common to the cat race. Fresh air, light and adequate space are essentials, and can be provided only in an outside cattery. It cannot be too strongly stated that a basement room is no fit place in which to keep cats, yet the statement is necessary, for many cats are kept under such conditions.

[Outdoor Catteries]

Many breeders have been successful in keeping and breeding cats outdoors in special houses built for the purpose, while others have achieved a similar success by using converted outhouses. Where outside catteries are used, however, certain essentials must be borne in mind for the comfort and convenience of both cat and attendant. Perhaps one ought not to raise moral issues in a book of this type, but the reminder that the cat is essentially a domestic animal may not be out of place.

The house should possess sufficient height to allow the attendant to work in comfort ; a house in which one cannot stand upright makes for neither comfort nor efficiency. Thus a very satisfactory height is 7 feet 6 inches, for it not only provides sufficient headroom but at the same time ensures adequate air space for the animals. A house 8 feet long and 6 feet wide will provide enough floor space for several queens to be kept together when they are not breeding, or for a litter of kittens to be reared after they have been weaned. It should be the usual practice to allow cats to have companionship at all times except when a queen is rearing a family. Statements that cats are solitary creatures and prefer to live alone seem not to be proved by experience. The internal fittings should be simple yet adequate. A wide shelf running round the inside of the house about 3 feet from the floor is much appreciated by the inmates, particularly when part of the shelf runs along by a window. Usually that is the favourite position in the house. Window space should be adequate to provide plenty of light, and two windows 3 feet by 2 feet on the front of the house will provide this light, and yet not be so large that the house is uncomfortably cold in the winter.

The sturdier the construction the longer the house will last and the better it will protect its inmates. Flimsy boarding which after a year or two develops cracks between the boards is a positive menace. Outside walls constructed of $\frac{3}{4}$-inch boards



Photo : S. F. Heath

MISS GOLD'S OUTDOOR CATTERY AT RUDGWICK



MRS. DUNCAN HINDLEY'S OUTDOOR CATTERY AT HIGH PRESTWICK

with a matchboard lining produce a structure which will be reasonably warm and weatherproof for many years. The floor should be of 1-inch board and well raised above the ground, for unless free ventilation is allowed under the house there is sure to be dampness, which is extremely dangerous for cats.

With our English climate it would not always be possible to have the windows open, and consequently adequate ventilation would have to be provided. Baffled inlets at a height where there was no danger of a cat lying in a draught, and outlets near the roof, could easily be managed by any builder given the task of construction.

Some cat houses have built-in beds for the occupants, but usually these are not easy of access and therefore difficult to clean. On the whole it is better to provide sleeping boxes similar to those which have been suggested for animals living in the house with the family.

One further convenience as part of the structure should be regarded as a permanent fixture. That is a cupboard in which cleaning materials and simple medicines can be kept. All those articles which are to be in almost daily use should be kept on the spot.

With outdoor catteries the suitability of the run attached to the house is of the greatest importance. The larger the run the better, but naturally its size is limited by expense and also by the amount of space available.

When possible the run should be at least 16 feet in length, and even 20 feet could not be considered over generous. It should be 6 feet high and its width will be decided by the dimensions of the house. With the house described here the run might well be fitted to the long side, which would then provide exercise space 8 feet by 16 feet by 6 feet. Height is most valuable, as cats enjoy climbing up the wire, and exercise of this sort helps to keep them in excellent condition.

Wire netting must be used to cover sides and top and the most satisfactory mesh is $\frac{1}{2}$-inch. Wire of this mesh prevents any possibility of fighting with stray cats outside, and it is also too small to allow birds to get into the run. It is never wise to use wire through which cats or kittens can force their heads, for a cat that feels itself trapped is liable to panic with serious consequences. Part of this outside run should be roofed for a distance of about 6 feet, and the sides should also have some sort of protection, so that even on wet but warm days in summer the cat can be outside and yet be protected against rain. Access to this run can be provided by means of a pophole with sliding cover.

The covered portion of the run should have a concrete or firm ash floor which can be easily cleaned. The uncovered portion, however, is best sown with grass kept short except for one corner, where the cats should be able to find that coarse grass which they find so pleasant to eat.

A bush planted in the middle of the run provides pleasant shade in summer, while a good solid section of tree-trunk makes an excellent resting place as well as being useful as a scratching post.

If the bareness of the run and netting is an offence to the eye, climbing plants can be planted outside. They will provide that maximum of shade in summer which is needed if the coats of show cats are not to be bleached by the sun, but one must exercise care in choosing plants whose growth is not so luxurious that their weight will damage the netting in the space of a year or two.

Where a number of cat houses are built together it is convenient to have a wide corridor running behind them. This can be used for easy access to the separate houses, while at one end of this corridor there may well be a separate room in which food can be prepared and where also grooming can be done more easily than in the individual houses.

The stud cat will need a house somewhat different from that which has been described. (*See Stud House.*)

Champions

At open shows held under the control of the Governing Council of the Cat Fancy, championship certificates may be granted to be awarded in the open breed classes. When such certificates are granted to any particular show it is then known as a Championship Show. Two certificates are granted for each breed, one for males and the other for females. It is usual to grant this certificate irrespective of the number of cats in the class, and it may thus be seen that the winning of such a certificate may vary in difficulty in proportion to the number of competitors in the class.

When a cat has won a championship certificate under three different judges, he or she is entitled to use the word " Champion " as a prefix to the registered name. It will be realized that when a breed is popular, and there are many specimens of high quality, the winning of a full championship is the sign of undoubted merit.

If a cat which has won a full championship in one country goes to another, and there, under the rules of the Fancy in that country, again becomes a champion, it may then attain the highest rank in the cat world of International Champion.

All breeders naturally hope to breed champions, but for some hope is long deferred.

Children and Cats

All young children are attracted to kittens and enjoy having one as a pet, but it is very doubtful if many kittens appreciate the compliment which is thus paid to their attractiveness.

It is an excellent idea that children should be allowed to have animals as pets, but it is essential that someone should take the trouble to see that they understand how to treat the small creatures. If that is done the child learns the meaning of responsibility, which is a valuable lesson to learn at an early age.

Most children, in an excess of affection, are far too rough in their treatment of young kittens. They do not understand that beneath the long coat of a small Persian kitten there is a small and extremely fragile body. The bones are small and the body can easily be bruised by careless handling. Any child to whom the facts have been explained will usually act in accordance with them and treat the animal with kindly consideration. If, however, the parent takes no trouble in helping the child to understand, he or she must not be surprised if the child is scratched. It is unfair to blame the kitten, who is only trying to escape from treatment which it finds unpleasant or merely because it is afraid. When the child has learned to treat the animal with consideration, claws will no longer be a necessary weapon of defence.

Children must also be taught that a cat must not be neglected when the fascinating playfulness of the kitten has given way to the more staid behaviour of maturity. Unless the animal is to be cared for when it is grown up, it should not be accepted as a plaything for the few months of its kittenhood. Many cats are treated in this way, but thoughtlessness of this kind is unpardonable.

Chills

See Catarrh and Diseases of the Chest.

Chinchilla Persians

To many the Chinchilla is the most beautiful of all cats, for its colouring is such that one is irresistibly attracted to its gracefulness. Unfortunately, however, it is a variety which seems to have lost much of its earlier popularity. It may be that the difficulty of breeding a really first-class specimen capable of holding its own with cats of any other variety has discouraged breeders, but it should be remembered that during the past fifteen years a number

of Chinchillas have, upon frequent occasions, been awarded Best in Show. Whatever the cause, the fact remains that there are comparatively few breeders of Chinchillas today, and most of the cats that one sees fall far below the standard of perfection.

When there are few breeders of any variety the time soon arrives when the stock becomes too closely " inbred ", a fact which shows itself in loss of stamina. Chinchillas today are certainly in need of more substance, but it will take many years of effort to get rid of that fineness of bone which is one of their main faults.

The silver coat ticked with dark hairs is most attractive, but the present tendency seems to be to produce animals which are almost white. Loss of ticking will in the end take from the animal much of its charm, and breeders should pay attention to this detail.

An emerald eye to set off a silver coat produces an animal of great beauty, but eye colour in present-day Chinchillas is poor. The emerald eye of the Champions of former days has now given place to a pale green eye which is not nearly as attractive. In fact, with many Chinchillas that one sees today, eye colour has become a yellow green which is a definite blemish.

It is extremely difficult to know what to do to improve matters, for there is no satisfactory outcross for this variety. Stamina would definitely be improved by crossing a Blue male with a Chinchilla queen, but the orange eye of the Blue is dominant to the green eye of the Chinchilla. This would mean that robustness would be the gain but eye colour the loss. No doubt this cross, despite its disadvantages, is the only real hope for improvement. Long years of selection would then be necessary to restore the eye colour. The breed is, however, well worth the effort.

Careless " inbreeding " has also produced many Chinchillas that are poor breeders, as can be proved by the record of litters born and the number of kittens in each litter. A family of one or two kittens cannot be considered as satisfactory, much less so when even such litters have to be produced with the help of a veterinary surgeon. The road back to pre-eminence among cat varieties will be a long one, but some enthusiastic breeder will no doubt make the effort.

The first sight of newly born Chinchilla kittens may be a shock, for they look very different from the ideal. Usually one notices distinct tabby markings including rings on the tail. This, however, need cause no alarm, for the Chinchilla was produced from a marked variety. As the weeks go by the coat clears, and at six months one can form a fairly clear idea of what the adult cat



CHINCHILLA

CH. FOXBURROW TILLIWILLI



Photo : Sport and General

CHINCHILLA

CH. MAB OF ALLINGTON

will be like. The rings on the tail invariably disappear, but if the feet or legs are barred it is very unlikely that the kitten will ever develop the white legs and feet required for perfection. It is remarkable that the darkest kitten in the nest frequently becomes the palest adult, and it is most unwise to discard kittens until they have completely lost their baby coat.

Evenness of ticking is what is required, and this should be confined to head, back, flanks and tail. The chin, legs, feet, and the fur on the stomach should be pure white. It is these contrasts which make up the true beauty of the perfect Chinchilla.

OFFICIAL STANDARD

Colour : The undercoat should be pure white, the coat on back, flanks, head, ears and tail being tipped with black, this tipping to be evenly distributed, thus giving the characteristic sparkling silver appearance ; the legs may be very slightly shaded with the tipping, but the chin, ear tufts, stomach and chest must be pure white ; any tabby markings or brown or cream tinge is a drawback. The tip of the nose should be brick-red, and the visible skin on eyelids and the pads should be black or dark brown.

Head : Broad and round, with breadth between ears and wide at the muzzle ; snub nose ; small, well-tufted ears.

Shape : Cobby body ; short, thick legs.

Eyes : Large, round and most expressive, emerald or blue-green in colour.

Coat and Condition : Silky and fine in texture, long and dense, extra long on frill.

Tail : Short and bushy.

SCALE OF POINTS

Colour	25
Head	20
Shape	15
Eyes	15
Coat and Condition	15
Tail	10
	100

Choking

Choking can occur from a variety of causes, but usually the explanation is simple, especially when the animal has just partaken of a meal. It may be that a piece of meat which was too large has become lodged in the œsophagus. By retching the cat endeavours to remove this. Although for the moment the symptoms may be alarming both to cat and owner, in most cases the animal succeeds in vomiting the obstruction. Once this has happened the cat is perfectly comfortable, and will continue to eat its meal if this is not already finished.

If, however, the retching continues, an examination must be made both of the mouth and also the throat. This is by no means a simple task, and before attempting it the cat should be securely wrapped in a large towel so that it cannot use its feet. Stout gloves should also be worn by the person carrying out the inspection or he will most certainly be badly bitten. Two people can manage this task far better than one. On opening the mouth it is probable that either a meat or fish bone will be found to be wedged across the roof, or it may be at the back of the throat. Obviously this must be removed, and a pair of forceps is the best instrument for the purpose. The obstruction should always be grasped near one of its ends and not in the middle. By very gentle pressure, either forwards or backwards, this one end may be dislodged and the bone removed. If it is grasped in the middle it is quite probable that the flesh on both sides will be torn. With fish bones even greater care must be exercised, for usually they are very sharp and may already have penetrated the flesh. With them one should try to cut the bone in the middle with a

pair of round-ended scissors, and then each half may be removed separately with the forceps.

When no obstruction is seen on opening the mouth, the patient must be seen by a vet., for the removal of obstructions deep down in the œsophagus cannot be safely undertaken by any unskilled person.

Constant retching and inability to swallow may, of course, be the result of an inflamed condition of the throat, and not caused by a temporary obstruction due to the lodging of some foreign body. Diagnosis and treatment in such cases must be left to the vet.

Claw Cutting

A cat's claws are extremely sharp and have an unfortunate knack of catching in fabric or clothes. Sometimes they even penetrate the flesh of the unfortunate owner. Naturally, if the animal is allowed complete freedom, the tips of the claws become blunted with use, but a cat confined to the house has no such opportunities. If, however, a scratching log is provided for the house cat, improvement will soon be noticed.

It may be necessary at times to cut a broken claw, but cutting, apart from this, cannot be recommended. One must deal with a broken claw or the rough edge may do considerable damage during the daily scratching.

When one attempts to cut claws with scissors it is almost impossible to get a clean edge, and often one only succeeds in splitting the horn and thereby making matters worse. Nail clippers are no more satisfactory than scissors. Probably the best one can do is to rub the tips or rough edges with a nail file ; a tedious business but usually more successful than other methods.

Cleft Palates

Occasionally one has a litter in which one or more of the kittens is suffering from a cleft palate. There is just nothing that can be done about this, for this deformed kitten is bound to die, and the kindest plan is to kill it as soon as the trouble is noticed.

For the novice it is a very wise rule which says that young kittens should be interfered with as little as possible for the first fortnight of their lives. Thus it would be most unwise for the beginner to open the mouths of newly-born kittens to see if the palate was complete. Nor is this necessary, for there are other signs, even for the uninitiated, which will point to this trouble when it exists in a young kitten.

A cleft palate means that there is an open space between the mouth and the nose in addition to the normal passage from the

throat into the nasal organs. As this is so, suction is impossible, for instead of the enclosed space formed by the tongue, the roof of the mouth and the mother's nipple, there is also an inlet from the nose. Thus when the kitten tries to suck it merely draws in air through the nostrils, and no pull can be made on the nipple to draw off the milk. Unless the kitten is killed at once it will gradually die from starvation.

As soon as kittens are born they start to feed, and if one of the litter cannot satisfy its hunger it will very soon become restless and noisy. A normal litter will feed and then sleep. Probably the litter will make no sound for the first few days, except on those rare occasions when the mother is away from her family and they notice her absence.

If, some hours after the litter has been born, one of the kittens is crawling aimlessly round the box and crying, one can be sure that there is something definitely wrong. Quite probably the mother will take no notice of this kitten, for animals have an uncanny instinct for knowing when one of their young is not worth attention. The owner, however, must adopt a different attitude.

The cry of a kitten with a cleft palate is unmistakable and entirely different from normal. If one listens carefully one can hear that the sound comes not only from the mouth but also from the nose. If such a kitten is held close to the ear, one can hear a whistle in addition to the cry. The breathing is usually noticeably noisy and nasal. When such signs are observed that is the time to inspect the mouth, and there is a very strong possibility that one will see a definite cleft in the roof of the mouth. In some cases the cleft does not extend beyond the soft palate, but at times this gap will run forward almost as far as the teeth. Whether the cleft is partial or complete the kitten should be immediately destroyed.

It is hardly the function of the layman to attempt to attribute a cause for this deformity, although a few general remarks may not be out of place.

A cleft palate is definitely a case of bad bone formation, and consequently before the queen has another litter one should make quite sure that her system is not lacking in calcium, which is essential for the building of satisfactory bone. The chances are very strongly in favour of the queen being in some way the cause of the trouble, though it would also be a wise precaution to choose a different sire for the next litter.

It has been said that too close " inbreeding " causes cleft palates. That, however, is only another way of saying that unskilful inbreeding always produces some unfortunate results in the long run.

Some queens never produce a kitten with a cleft palate, others occasionally have a kitten deformed in this way, but it is extremely rare for a queen always to produce such monstrosities.

Breeders sometimes carry on for years without a single case, and then in the space of a few months several kittens have to be destroyed for this reason. Cases are so comparatively rare, however, that the beginner need feel little anxiety. Should the misfortune appear in his stock, however, some attempt should then be made to find a reason for this minor disaster.

Coat Types

Where the standard for any particular breed of the long-haired varieties refers to the texture of coat, it demands that this shall be silky. This is a very necessary reminder of what is required, for in practice it is usual to find a variety of coat types. Some coats are made up of hair which is extremely coarse and thus so heavy that no amount of grooming will produce a pleasing effect. The coat always hangs lankly down the animal's side. The other extreme is the woolly coat which may be made to look most attractive, a condition which will not be long maintained, for woolly hair easily mats. It is the happy medium between these two which is required, and this can only be obtained by careful breeding. Most breeders pay considerable attention to details when selecting suitable pairs for mating, and type of coat should certainly be one of them.

Length of the hair is also important and this varies considerably in individuals. In normal times there are a number of preparations on the market which are put forward as valuable aids to growth of coat, but such aids should be unnecessary. Provided the cat has an ancestry of full coats, only fitness and climatic conditions should be needed to produce a long and full coat showing the lustre of health. An unfit cat cannot be expected to show a wealth of fur, for all physical processes are slowed down when health is not good. The glands controlling hair growth must be in sound condition. Temperature also has its effect on the coat, as Nature provides for the animal's need and not its appearance. High temperatures may produce length, but they will not at the same time lead to density. Cold, however, will mean that a heavy coat has to be grown to protect the cat. Generally the cat which is allowed to experience a variety of temperatures, and is not treated as a hot-house plant, grows the best coat. One has to bear in mind, however, that low temperatures, if maintained over long periods, tend to produce coarseness of coat.

Short-haired cats, when in condition, display a gloss on their coats which can never be achieved by the long-haired varieties. In this case the fur should also be thick, or perhaps a better word is " close ". There is a tendency for short-haired cats to be too long in coat, and when this is the case the sleekness which should be a characteristic is lost.

The coat of the Manx and Abyssinian is different from that of any other variety, for it is a double coat. There is the fur of medium length forming the outer coat, and below this is a very short and thick undercoat. Just as the gait of the Manx is similar to that of the rabbit, the coat also shows a like similarity.

When a cat has developed a coat of outstanding quality careful grooming will help to retain it. Neglect, however, will soon produce an obvious effect.



RUSSIAN BLUE
KRIMSKY OF CORYTON

Cod Liver Oil (Halibut Liver Oil)

Cod Liver Oil is very rich in Vitamin D, and thus would be a most valuable addition to diet were it not for the fact that it so often produces digestive disturbances. When, however, kittens are reared indoors, as is often the case, some source of this vitamin must be found and supplied daily. Fortunately Halibut Liver Oil is very rich in this substance, with the result that the quantity needed is much smaller. Such small quantities rarely cause any bowel trouble, although discretion has to be used when introducing Halibut Liver Oil because of its apparent laxative qualities.

When rearing kittens it is usual to give one drop each day on the food at the end of the sixth week. During the next week the dose may be doubled, and finally three drops can be given each day. Under normal circumstances this dose should not be increased, but it must be continued until the animal is able to spend much of its time each day in sunshine, or at least direct daylight.

Some kittens will refuse food when Halibut Oil has been

added to it, in which event the dose may be given straight into the mouth with a glass dropper.

Cold in Eye

See Eyes.

Colds

See Catarrh and Diseases of the Chest.

Collars

Some breeders like to adorn their cats with a collar and bell, but this practice cannot be recommended, for the risks entailed are great while the advantages are few, if any.

A leather collar is without doubt the most dangerous type that can be used, for if the animal is allowed freedom outside the house there is every risk that a small branch will become wedged under the collar, and in its efforts to free itself the cat will only succeed in producing strangulation. Cats are not capable of working out for themselves the mechanics of release under these circumstances. It is their usual policy to move forward and this only makes the matter worse. The only legitimate use for a collar is when one wishes to take a stud cat for a walk. Then a collar and lead such as are used for small dogs may be found a useful means of controlling him. In this case there is obviously no risk, for the animal is under observation all the time.

Some years ago there was on the market a safety collar made of rubber and carrying a disc on which the name and address of the owner could be written. The idea behind the use of this was that if the animal strayed there was a chance of its being returned. As the homing instinct of cats is particularly strong a collar for this purpose is quite unnecessary, and there is little hope that the conscience of a thief will be stirred by the sight of the owner's name. Such collars are not safe unless the cat becomes suspended by its own weight, when the rubber will stretch and thus allow the animal to fall. If it becomes twisted by being entangled in a branch it may be at least as uncomfortable, if not as dangerous, as a leather collar.

The best advice is to have nothing to do with ribbons or collars except at times when the cat is under constant observation.

Colour Breeding

The following list contains references for much of the research work which has been done on the subject of colour breeding

in cats. Unfortunately the cat has not been used as much as some other animals for research of this nature; a fact which can easily be understood when one realizes that the mouse is mature at about fourteen weeks, whereas one has to wait for at least twelve months before the cat reaches a comparable stage of development. Thus with mice results can be obtained much more quickly.

TORTOISESHELL, YELLOW AND BLACK

1. *Bamber, Ruth C.*
The male Tortoiseshell cat. 1921.
Journal of Genetics, Vol. 12 (2), pp. 209-216.

2. *Doncaster, L.*
On the inheritance of Tortoiseshell and related colours in cats. 1904.
Proceedings Cambridge Philosophical Society, 13, p. 35.

3. *Tjebbes, K., and Wriedt, C.*
Dominant Black in cats and its bearings on the question of Tortoiseshell in males. 1926.
Journal of Genetics, Vol. 17 (2), pp. 207–209.

4. *Bamber, Ruth C., and Herdman, E. C.*
The inheritance of Black, Yellow and Tortoiseshell coat colour in cats. 1927.
Journal of Genetics, Vol. 18 (1), pp. 87–97.
See also Vol. 18 (2), pp. 219–221.

5. *Tjebbes, K., and Wriedt, C.*
Dominant Black in cats and Tortoiseshell males—a reply. 1927.
Journal of Genetics, Vol. 19 (1), p. 131.

6. *Bamber, Ruth C., and Herdman, E. C.*
Two new colour types in cats.
Nature, 127, No. 3206, p. 558.

7. *Bamber, Ruth C.*
A report on the progeny of a Tortoiseshell male cat, together with a discussion of his gametic constitution. 1932.
Journal of Genetics, Vol. 26, pp. 115–128.

SIAMESE, *etc.*

8. *Tjebbes, K.*
Crosses with Siamese cats. 1923.
Journal of Genetics, Vol. 14 (3), pp. 355–366.

9. *Keeler, C. E., and Cobb, V.*
Allelomorphism of Silver and Siamese coat variations in the domestic cat. 1933.
Journal of Heredity, Vol. 24 (5), pp. 181–184.

10. *Keeler, C. E., and Cobb, V.*
Siamese—Persian Cats. 1936.
Journal of Heredity, Vol. 27, pp. 339–340.

11. *Iljin, N. A., and Iljin, V. N.*
Temperature effects on the colour of the Siamese cat. 1930.
Journal of Heredity, Vol. 21, pp. 309–318.

TABBY MARKINGS

12. *Pocock, R. I.*
On Tabby cats and some features in the inheritance of their coat patterns and colour.
Mendel Journal, No. 2, pp. 53–73.

GENERAL

13. *Whiting, P. W.*
Inheritance of coat colour in cats. 1918.
Experimental Zoology, 25, p. 539.

14. *Wright, S.*
Colour inheritance in mammals. The cat. 1918.
Journal of Heredity, Vol. 9, p. 139.

15. *Bamber, Ruth C.*
Genetics of domestic cats. 1927.
Bibliographia Genetica, Vol. 3, pp. 1–86.

16. *Haldane, J. B. S.*
The comparative genetics of colour in rodents and carnivora. 1927.
Biological Reviews, Vol. 2, pp. 199–212.

WHITE SPOTTING

17. *Kühn, A., and Knöning, F.*
The inheritance of white spotting in the domestic cat. 1928.
Züchtungskunde, Vol. 3, pp. 448–454 (in German).
In the years before the war considerable research on cat breeding was carried out at Göttingen.

THE BURMESE CAT

18. *Thompson, J. C., Cobb, V., Keeler, C. E., and Dmytryk, M.*
Genetics of the Burmese Cat. 1943.
Journal of Heredity, Vol. 34, pp. 119–123.

Combs

Combs used for cats should be very carefully chosen, for a bad comb can do so much damage that the coat will be out of show condition for a very long time. In practice the cat breeder should have several combs in which the teeth are set at various widths. Some cats have such heavy coats that a fine comb will pull out quantities of the living hair if the fur is at all matted, whereas a comb of coarser mesh will help to loosen the matted coat and make the use of a finer comb afterwards much less dangerous. At all costs one should avoid using any comb with pointed teeth, for it is not only uncomfortable for the cat but will in a short time ruin the fur. During the war it was impossible to purchase combs suitable for cats, but in normal times several firms produce those specially adapted for the purpose. As soon as it is possible the breeder would be wise to purchase a set of combs rather than continue to make do with wartime substitutes.

Combs are not only valuable as aids to normal grooming, but a fine comb will also remove parasites from the underfur.

A cat which is regularly groomed with brush and comb should rarely need the application of insect powder except as a matter of normal routine.

Careful use of the comb will also help to promote a healthy skin condition, and this in its turn ensures a coat of good length and quality.

Common Cold

See Catarrh and Diseases of the Chest.

Concussion

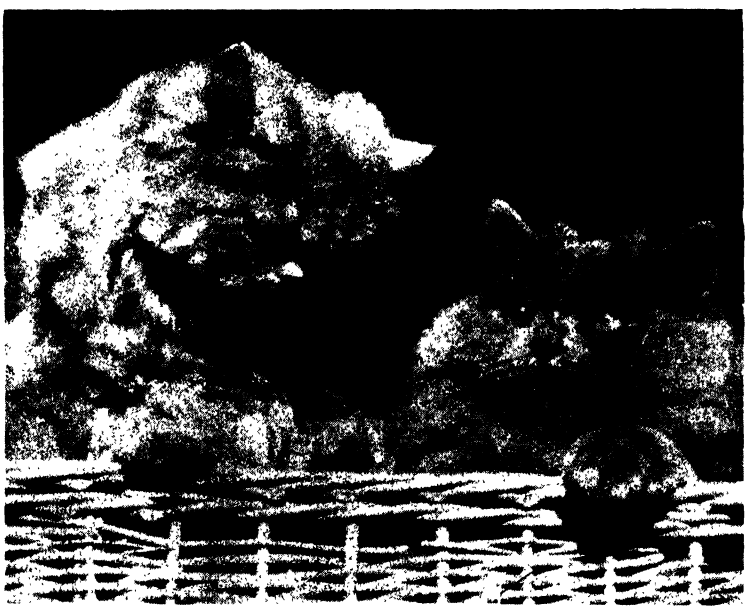
Although cats are unusually nimble, and even when falling from a considerable height usually succeed in landing on their feet, it sometimes happens that as a result of an accident the animal will strike its head so violently that it suffers from concussion. This injury, nevertheless, is much more likely to be the result of a heavy but not long fall in which there has not been sufficient time to regain balance. Occasionally, when scared in a dark room, the cat will injure itself in this fashion, for, although a cat can probably see much better in semi-darkness than a human being is able to do, it is quite a false notion which states that cats can see in the dark.

Unconsciousness may not follow immediately on the blow, but frequently occurs some short time afterwards. Breathing is slow and light and the body is cold to the touch. As it is almost impossible for the amateur to differentiate between concussion

and compression, in which case bone is actually pressing on the brain, a detailed examination by a vet. is of first importance.

An inspection of the eyes may be helpful, for in concussion both pupils are dilated, whereas this is not necessarily the case in compression.

First-aid treatment is quite simple, as it entails only the provision of warmth and complete rest. When suffering from concussion the animal may not have control over its natural functions, and it is thus wise to cover the bedding with newspaper which can be easily removed and burned.



BLUES

SWEET SULTAN OF DUNESK, DAYDREAM OF DUNESK

Condition

It is very difficult to describe in words what one means by the term " condition ", yet it is something in animal breeding which is of supreme importance. Expressed in its simplest terms perhaps one might say that it is a combination of those signs which indicate that the animal is in perfect health and at the same time is well cared for. Unless a cat is in perfect health no amount of grooming will be able to make it appear in fine condition, and, on the other hand, fitness itself needs the assis-

tance of brush and comb to make the sparkling condition of the animal apparent for all to see.

Actually condition is made up of many qualities. There is brightness of eye and sheen of coat which must be seen on a body that is well covered with flesh but which is not too fat. A cat in perfect condition not only looks fit, but the alertness of its movements and the healthiness of its appetite confirm that appearance.

The standard of points for some of the varieties allows ten points out of a hundred for condition, but in actual practice its value is much more than this. In fact it is quite often the deciding factor between two exhibits which perhaps in type and colour are equal. Sometimes its influence on the result is even greater, for a mediocre cat in excellent condition may show up to better advantage than one which in essentials is better but at the time of the show is out of condition.

Outstanding condition, it must be remembered, is not something which can be achieved in a matter of days, for it is the cumulative result of good quarters, good food and careful grooming over a long period. Perhaps it is unnecessary to say that it should be the aim of all breeders to see that their cats are in first-class condition.

Conjunctivitis

See Eyes.

Constipation

Although constipation is quite common with pedigree cats, it is an ill which can be blamed almost entirely to bad management. A cat which is given a rational diet, and is also allowed plenty of exercise, rarely suffers from this unnatural condition of the bowel.

When a diet is provided which contains too much starchy food, constipation often results, particularly when, having eaten a large meal, the animal spends the hours until the next feeding time in sleep. Some cats will act in this way, but when they do it is the result of bad training, for although it is quite normal and sensible for an animal to take a short rest after a meal, its natural inclination is then for exercise. This will not only give it an appetite, but will promote good tone in the muscles of the intestine. This is essential if normal peristaltic action is to take place.

Variety in diet is very helpful, and the addition of a little liver, or a sardine with some of the oil, will usually put the

matter right. Unfortunately some breeders only seem to notice the trouble when it has become chronic. In chronic cases cure often takes as long as the unsatisfactory condition took to develop.

The bowels should move regularly every day, and as soon as this is not the case management should be scrutinized to see where it is at fault.

If variation of diet does not produce improvement, a dose of liquid paraffin should be given. (*See Liquid Paraffin.*)

It is, however, far better to re-educate the bowels than to be compelled eventually to resort to laxatives which may be necessary if liquid paraffin provides only temporary relief.

Perhaps it should be mentioned here that constipation quite often follows diarrhœa. This, however, is only a temporary derangement which will right itself when the cat has been back on a normal diet and routine for a few days.

Constipation must always be regarded as a possible cause for many more serious ills, and it is unfortunate that this should so frequently result from the carelessness of owners.

Convalescence

In the illness of cats and kittens the period of convalescence is probably the most difficult with which to deal satisfactorily, and one which calls for a large measure of resourcefulness and determination on the part of the owner.

Cats, as a rule, are notoriously bad patients, and rarely show any strong desire to live when life is painful or otherwise unpleasant, and consequently, when they are the victims of some serious illness, they are usually saved in spite of themselves. The conscious mind of a cat obviously cannot grasp the significance of life and death ; it merely realizes that life at the moment is distressing, and it is content to lie until its senses are attracted by something external, or death just happens to come first. A realization of this simple fact is of great assistance to the person who is endeavouring to save a valued cat.

A cat ceases to eat because it has no appetite, and it will not of itself take food because its strength may be maintained by doing so ; a fact it cannot realize. Thus, when a serious illness has run its course, and all symptoms of the disease have disappeared, the animal is usually in a feeble and emaciated state. At this stage many cats will not make the slightest effort to help themselves apart from showing some willingness to drink fresh water.

Thus, the first step in convalescence is to persuade the animal

to start eating again ; it may indeed be necessary to feed by hand until there is a return of natural appetite. Meat extracts may be used for this purpose, but any which are highly seasoned or contain much salt should not be used. Nourishment in this concentrated form will help to maintain strength, but will do nothing to restore the flesh which has been lost during the course of the illness. No improvement in this respect will be seen until the animal again gets back to solid food.

Appetite can sometimes be stimulated by giving a vitamin tablet, such as Benerva Compound, which helps to promote the normal activity of the digestive organs. One must always remember, too, that it is the smell of food rather than the sight of it which attracts the animal. Even in health the first thing that a cat does before eating is to sniff what has been put down for it.

During the early stages of convalescence it is a good plan to limit the diet to meat in one form or another, and for a few days at least to avoid milky foods. Foods not too difficult to digest, but which require biting, and then are sufficiently bulky to promote a feeling of being satisfied, are the best to use. Steamed fish, rabbit and cooked beef are usually acceptable, and provide the stomach and intestines with the necessary work to bring them back to normality. It may be argued that beef is not easily digested, but many cats seem able to take it when more obviously digestible foods are not tolerated.

Milky foods are usually easily digested in the case of human beings, but in cats are much more likely to produce digestive disturbances. Looseness of the bowels is certainly to be avoided at all costs if the cat is to regain its strength reasonably quickly.

When appetite returns the animal soon becomes ravenous, and seems not to be satisfied with the quantity of food that is provided. It would, however, be a fatal error to give way to this desire for a large meal, as the animal would almost certainly be incapable of digesting it. At first a teaspoonful at each meal is adequate, and when it is obvious that this can be digested, the quantity given may be gradually increased. Due emphasis must be placed on the word " gradually ", for a too rapid increase will only cause a setback which may put the animal off its food for several days, even if no more serious consequences result from the indiscretion.

Another point to consider in convalescence is the question of temperature. During illness cats need warmth, and it is essential that later they should gradually become accustomed to lower and variable temperatures. This can usually be effected in the course of a few days, but it must always be

remembered that a cat recovering from a serious illness should not be allowed to develop a chill.

In the space of a week or two the cure may be complete and permanent if the owner regards this period as being one fraught with many dangers which must be foreseen and avoided.

Convulsions

See Fits.

Cream Persians (*by Kathleen Yorke*)

The Cream is one of the most attractive of the long-haired varieties. Its pale, clear, uniform colour and length of coat is much admired, and shows up in contrast with the deep copper of its large, round eyes. The coat must be uniform in colour throughout, without the faintest trace of markings or shading.

The body should be cobby, with a massive head and well-placed ears. The muzzle should be broad, the legs short and well boned with well-tufted toes.

The brush should be short and well furnished and of the same width from root to tip. A pale or white tip to the tail is a very serious fault.

One of the most important features to bear in mind with Creams is uniformity of colour. There should be no variation in shade from the tip of the fur to its roots, and shading from back to sides should be conspicuous by its absence.

Before the war we had come to know the lovely pale and even cream coat which was sound to the roots, with no whiteness of undercoat and no hot tint along the back and down the tail. These faults seem to be creeping back again now.

In the past we owed the pale, even colouring to long and careful work over many years by breeders who had this variety so much at heart. They had worked hard to eradicate all traces of " red " breeding from the pedigrees of Creams.

Here I must mention Mrs. Barbara Stevenson, Miss Sylvia Langhorne, Mrs. Soames and Captain Powell, who were breeders of some of the most famous queens in the history of cats. Among them were Miss Matty o' the Combe, Champion Pickles of Hanley, famous as the dam of such wonderful cats as Champion Buff of Hanley, Dandy and Dermot of Hanley and many other noted winners.

Champion Buff of Hanley was, I should say, the most famous of all great Creams, and was himself the sire of many Cream and Blue-Cream Champions.

Another cat from the Hanley cattery which I must mention

is Champion Biscuit by Champion Mischief of Bredon ex Champion Wish of Bredon. What a magnificent cat he was, with the palest and soundest coat that one could wish to see. Mrs. Stevenson must indeed be proud of all those great winners. Much credit is due to her for the excellence of present-day Creams.

It was also Mrs. Stevenson who introduced blue blood into Creams to clear and at the same time help to keep the desirable pale, sound coat. In this way the type of Creams was also improved and crossing with Reds was avoided. So keen was she that she preferred not to accept for her studs either Red or Tortoiseshell queens. It was from these varieties that bars and shadings had come.



Photo : F. G. Jackson

CREAM

ORIEL OF SUNFIELD

We will now see why mixing blue with cream is so useful.

If a Cream queen mated to a Cream male did not produce kittens which were considerably better than their mother, I should use an exceptionally good-headed Blue male of pale colour. From this mating one could expect Cream males and Blue-Cream females.

I will now explain the fascination and usefulness of Blue-Creams.

A Blue-Cream female, if suitably mated, will produce a variety of colours—male and female Creams, Blue males and Blue-Cream females. When mated to a Blue male, however, she will never produce a Cream female. Champion Buff of Hanley and Champion Biscuit were produced by mating a Blue male to

a Cream female, while Champion Soame Crusader and Champion Bounce of Hanley resulted from the mating of a Cream male with a Cream female. Champion Vanity of Culloden, Champion Crœsus of Culloden and Sweetaboy were all produced from a Cream male mated with a Blue-Cream female. If a Blue male is mated to a Blue-Cream female the resulting litter should contain Cream males, Blue males and Blue-Cream females, but I cannot recollect the name of a Cream male produced in this way.

Breeders who wish to breed Cream to Cream should be very successful with the well-bred males which are at service today. One must study pedigrees carefully to make sure that those faults which one desires to avoid are not to be found in the cats whose names appear on the pedigree. Both skill and experiment are necessary if one is to breed the perfectly sound, unmarked kitten. Such a kitten should not be sold, but should be retained for future breeding.

Soundness of colour should be the main aim of the breeder, for type and eye colour usually present little difficulty in the breeding of Creams. Nothing is more beautiful to look at than a pale cream, flowing coat on a cat possessing deep copper eyes and grand type, so see what you can do, Cream breeders.

The late Captain Powell was a most successful breeder of Creams and Blue-Creams, and owned some very lovely specimens, such as Stanhope Fairy and Stanhope Bud, both of which he bred.

I have mentioned the use of Blue breeding with Creams for the purpose of clearing the colour in Creams. This cross also has a marked effect on improvement in type. After breeding Cream to Cream for several generations one frequently notices that type begins to disappear, and the hot tinge along the backbone returns. The ears also tend to get larger. What we need are small, well-rounded and well-set ears, for large, pricked ears tend to make the face look narrow. When these faults are noticed the time has come to reintroduce Blue blood again.

Do not choose always the most fashionable stud cat, but endeavour to choose a male who will correct the faults which the queen displays. By adopting this method you will make progress and breed certain winners as well as useful brood queens.

Great progress has been made by Cream breeders in the years before the war, and much of this progress has been maintained during the war years, as was noticed at the shows held at Notting-

ham at the end of 1945 and early in 1946. The greatest fault I noticed was the red tinge right down the back to the end of the tail. Some cats also had a white undercoat, and bars on the legs and markings on the flanks were not entirely absent.

Eye colour in this variety is still as brilliant as ever, while shape of eye and the width between is, if anything, even better. Type is excellent.



Photo: F. G. Jackson

CREAM

CH. IDMISTON CHAMPAGNE

Great credit is due to breeders of Creams that they have been able to maintain so high a standard through all the difficulties of the war years. If they can get back the even, pale colouring it will be a great achievement.

When your queen has had her litter keep your eye on the soundest unmarked kitten. There may be three or four, or even more, kittens in the litter, but you will nearly always find some with bars or markings. From my own experience I have found that the baby kitten which does not show these faults never develops them later. At three weeks you should be able to pick out the kitten you wish to keep, and by eight weeks you should know for certain if you have chosen well.

After that age kittens, like some children, go through a plain stage, and one begins to wonder if the choice has been wrong. Do not doubt, for the choice made at three weeks is nearly always correct. Take the kitten in the palm of your hand and hold it above eye level. See that it has a fine, big head with ears well down at each side. If they are not set low at this age the adult skull will almost certainly appear too narrow.

At this age I like the width between the eyes to be as much as the width of the eye itself when closed. If a line is drawn vertically from the inner junction of the ear with the skull, this line should fall outside the eye socket.

If you find all the good points for which you are looking, and none of those faults which I have mentioned, then your kitten should later do you great credit.

OFFICIAL STANDARD

Colour : To be pure and sound throughout without shading or markings.

Coat : Long, dense and silky, tail short and flowing.

Body : Cobby and solid, short thick legs.

Head : Broad and round, small ears well set and well tufted, short broad nose, full round cheeks.

Eyes : Large and round, deep copper colour.

SCALE OF POINTS

Coat	50
Body	15
Head	20
Eyes	15
	100

Cystitis

See Bladder Troubles.

D

Dandruff

Some cats seem to suffer from a very dry skin, and as a result one sees signs of dandruff or scurf, particularly at the base of the hairs. When this is the case it may be due to the fact that the general health of the animal is poor.

The best way of producing a cure is to alter the diet. The cat has probably not been receiving a satisfactory diet, and also the appetite may not be keen. A tonic such as Parrish's Chemical Food often proves useful. This, in addition to daily grooming with regular massage of the skin, should promote good circulation and restore the skin glands to normal function.

Too frequent washing will dry the skin and cause dandruff, but few cat breeders believe in bathing cats except on the rarest occasions.

If dandruff is confined to certain parts of the skin only, there is a strong possibility that this is an early sign of some skin disease. Such a condition needs closer investigation by a vet.

Deafness

Permanent deafness is very rare in cats, apart from those animals which are deaf from birth. Albinism always seems to carry with it the possibility of deafness, and the blue-eyed White appears to fall within this category. Certainly by far the largest number of deaf cats are white with blue eyes, and it is extremely rare for a specimen of any other variety to suffer from congenital deafness. Over a long period breeders have succeeded in reducing this disability by judicious mating, as not all cats of the variety are deaf. If no cats suffering from congenital deafness were ever used for breeding, the fault might soon disappear, which would probably mean that albinism in the variety would then be more apparent than real. As has been explained in sections on breeding, such animals would need to be heterozygous for this quality. In practice one would probably find that there had been an infusion of orange-eyed white blood somewhere in the pedigree.

Permanent deafness may be caused as the result of an accident in which the auditory nerve is damaged, but accidents of this kind are fortunately rarely experienced. Partial and temporary deafness, however, may arise from a number of causes, and the disability may become permanent if suitable treatment is not given.

With any disease in which catarrh is a common symptom, some degree of deafness may follow upon the blocking of the eustachean tubes with congealed mucus. In normal cases, as soon as these have cleared, acuteness of hearing will again return.

An excess of wax in the outer ear, which frequently follows any kind of inflammation of the middle ear, will often produce the same result. Pouring warmed olive oil into the ear and allowing it to soften the wax may be followed by gentle syringing, which will usually succeed in washing the wax out. Unless great care is exercised, the use of oil with long-haired varieties produces a very unpleasant appearance to the coat. No surplus oil must be left in the ear or the animal is certain to transfer it to the fur on its head.

With age, too, there is usually a tendency towards dullness of hearing, and in such cases there is nothing that can be done.

Most cats which are permanently deaf are inclined to be somewhat temperamental, as it is so easy for them to become alarmed. A normal cat is warned of many things by the acuteness of its hearing, but the deaf cat is surprised by sights of which it has not been warned by preliminary sounds. Even when the deafness is only partial and temporary, a cat usually seems much more dull and listless than when its hearing was normal.

For congenital deafness there is no cure, and when the condition of the middle ear is the cause, cure is difficult, but all other types of deafness will usually respond quite quickly to treatment.

Debility

See Anæmia.

Diarrhœa

In cats and kittens diarrhœa is quite a common complaint, yet, as there are so many possible causes for the trouble, treatment is at times difficult. It may be fairly easy to control temporarily, but one has always to remember that diarrhœa in itself is only a symptom, at times perhaps the only one, of some specific disease.

Firstly, one must understand quite clearly the meaning of the term, for much confusion results from failing to differentiate between diarrhœa and merely looseness of the motion. Frequency of loose motions is an essential symptom of true diarrhœa.

It not infrequently happens that a nursing queen passes one or perhaps two motions each day which are loose and offensive in smell. This is not diarrhœa, and is probably cured as soon as the quantity of milk which she is receiving is automatically reduced by the owner as soon as the family is weaned. Obviously the diet that the animal is receiving will affect the quality of the fæces.

If a cat or kitten which has appeared quite fit, and has shown a keen appetite, suddenly develops diarrhœa and loses its appetite, the probable cause is that some part of the food supplied has upset the digestive system and caused inflammation of the bowel. Thus one requires something which will control the symptom and at the same time soothe the bowel. Parke Davis produce a tablet which is very useful for this dual purpose. It is a mixture of subnitrated bismuth which has a beneficial effect on the bowel membrane, together with saccharated pepsin and aromatic powdered chalk. One of these tablets given three times a day half an hour before meals will usually control a mild attack. Kaolin given after a meal also has most beneficial effects in removing the toxic substances from the bowel. A proprietary brand called Kaylene can be purchased and administered in gelatine capsules, size 1. One of these filled capsules should be given after the meal.

Kittens are most susceptible to digestive upsets producing diarrhœa, and cure is often a matter of considerable patience. At times one feels that no improvement will ever appear, and when the trouble is persistent, the animal loses weight and presents a very woebegone appearance. Inflammation of the anus is usually shown by the animal scraping itself along the ground and also by its desire frequently to lick these parts. The anus looks red, and should be smeared with vaseline, or it may be dressed with liquid paraffin. Both substances will help to reduce the inflammation.

In kittens worms are a frequent cause of diarrhœa, and until the kitten is four months old there is very little that one can do about it, as worm medicines are definitely dangerous for young kittens. A weak solution of T.C.P., consisting of one part of T.C.P. to six of water, may be given in half-teaspoonful doses before food in the morning, and this may help to remove the parasites. When there is persistent diarrhœa, and worms

are known to be the cause, the advice of the vet. must be sought, for it would be definitely dangerous to do the dosing oneself.

Feeding, in cases of diarrhœa, presents a number of difficulties which can only be solved by knowing the normal diet of the cat, and being aware of those foods which it cannot tolerate. A cat that is used to milk may derive much benefit from a mixture of arrowroot and milk, but if normally the animal cannot take milk there is a danger of making the trouble worse if milk is given. Some dry arrowroot sprinkled over the food will be useful, but not all cats will eat their food when it has been garnished in this fashion. Meat is somewhat stimulating, and may not help in clearing up the trouble quickly, but if raw meat is avoided and that which is well cooked is substituted, it may prove to be the most satisfactory diet. After the diarrhœa has ceased, considerable care must be taken to see that meals are small and easily digested.

Diseases of the Chest

Although an adult cat should be able to shake off a head cold without developing any complications, provided it is protected from undue exposure, it often happens in practice that the cold is not recognized until the animal has been allowed to run the risk of more serious trouble.

Cats are very susceptible to affections of the chest, and pneumonia is among the more common of cat ailments. The distressing complaint may follow as a complication of any disease which has had the effect of producing a marked state of debility. For example, it is not at all uncommon for pneumonia to develop in bad cases of distemper, and in order to avoid this great care must be taken to protect the convalescent.

The most common and perhaps least serious of these chest complications is bronchitis, in which the seat of the trouble is the tubes leading to the lungs. In a simple case of bronchitis the cough is rarely hard, but unless immediate measures are taken to clear the trouble, a distressing cough follows and the cat exhausts itself with the violence of its coughing. Warmth is essential and must be provided by hot bottles. The air of the sick room must also be kept moist. This may be done quite easily by using the normal bronchitis kettle.

If bronchitis is neglected, pleurisy is likely to follow. This for a cat is most distressing because of the extreme pain which the disease causes. There is always a cough which is very hard and short. The cat seems afraid to take a deep breath because of the pain caused by even the normal process of breathing.

There is very little that one can do except to keep the patient warm, and at the same time to see that an abundance of fresh air is available.

It is an excellent plan to make a coat padded with cotton wool and to put this on as soon as there is any sign of serious trouble.

Pneumonia is always a possibility as a sequel to either bronchitis or pleurisy. In the case of pneumonia, however, pain is not usually great. It is only when pleurisy and pneumonia are combined, a not unusual occurrence, that there is much pain. Pneumonia, unless treated with considerable skill and care, is always likely to prove fatal, and this unfortunate possibility must always be borne in mind. It is a wise plan to give either M & B 693 or 760 as soon as the danger is realized. As has been suggested elsewhere in this book, an initial dose of ½ gm. should be given even before the vet. is called. The sooner the treatment is applied, the less serious the illness is likely to be.

With pneumonia, as with pleurisy, a warm jacket with cotton wool lining is most helpful. When, however, the crisis has passed, great care must be taken to reduce the thickness of the jacket by gradual stages. A chill at this time would almost certainly prove fatal. If a small amount of the cotton wool is plucked away each day there can be little danger. The jacket may then be discarded as soon as the outside temperature is satisfactory.

Appetite is usually lacking in all cases of respiratory disease, and yet it is essential that strength should be maintained. The diet provided must be light and yet nourishing. Small meals at frequent intervals are usually best suited to these cases, and such concentrated foods as Brand's Essences will be found to be of the utmost value.

With all diseases of the respiratory organs convalescence is a long process, and as there is always the likelihood of a quick recurrence of the disease no risks should be taken. One cannot feel that the cat is perfectly safe until it has again lived a normal life for several weeks.

Disinfectants and Deodorants

The use of deodorants in a cattery, particularly where males are kept, has obvious advantages, but concealing unpleasant odours by covering them with other smells more pleasant to the nose does not mean that germs have been killed or the danger of infection removed.

Disinfection is valuable at all times, but one must exercise great care in the choice of the substances used, for practically all the derivatives from coal are poisonous to cats in proportion to the strength in which they are used. Carbolic is particularly dangerous, and it is inadvisable to use it even in the form of soap.

If houses have to be disinfected, the best plan is to scrub everything carefully with hot water and washing soda. This will remove all grease and dirt. Afterwards the use of the blow-lamp will destroy most of the germs which may have been left after the scrubbing.

When infectious diseases such as influenza or enteritis have visited a cattery, thorough disinfection is essential before fresh stock may be introduced. All infected houses should be left empty for several months, and sunshine, the cheapest of all disinfectants when combined with fresh air, should be allowed to do its work. After the expiration of this period, scrubbing and burning with the blowlamp should be carried out for the second time. After that treatment there should be no further danger.

In addition some liquid disinfectant should be kept ready for use. Dettol has on many occasions proved extremely valuable, and, as has been said elsewhere, cats do not appear to object to its odour. T.C.P. is also useful, but some cats seem to be afraid of it by reason of its strong smell. One part of T.C.P. to six of water is a strong solution.

Fumigation is sometimes used as an extra safeguard after other means of disinfection have been practised. Formalin candles can be purchased, with full instructions for their use, at any chemists, and are much to be preferred to sulphur, the smell of which seems to cling to the woodwork of the cat house for a considerable time. The size of candle required depends upon the cubic capacity of the building. When preparing to use a formalin candle all cracks, whether round windows or doors, must be sealed with adhesive paper so that the fumes are unable to escape from the room before they have done their work.

There are also a number of pleasant pine fluids on the market, which, when sprayed in the cattery, leave behind a fresh and attractive smell. Some of these may have value as disinfectants, but the virtue of others lies solely in their ability to hide the smell of cat.

Even when there have been no cases of infectious disease, it is sound policy to disinfect, at least once a year, all buildings

used by cats. All equipment such as bedding, boxes and feeding utensils should be dealt with much more frequently. It is always far better to prevent disease than to be compelled later to attempt to cure it.

Distemper

Distemper of the cat is a very difficult disease to diagnose, as it may present the most varied symptoms, each of which may in the early stages be mistaken for the sign of some entirely different complaint.

In distemper there seem to be three areas which may be affected. These are the throat, lungs and intestines, and each or all may be attacked at the same time. In all types, however, it is usual to find ulceration of the mouth, and quite often this ulceration extends to the throat.

One of the first signs of the trouble is that the cat refuses to eat and appears listless. There seems to be some difficulty in swallowing, and inspection of the mouth even in the early stages may show the presence of that extensive ulceration which has already been mentioned.

Sometimes there are also present those symptoms of influenza which are so common in human beings. There is a discharge from the nose and eyes accompanied by a high, but not excessively high, temperature. If the temperature reaches 104 that is usually the limit, and it may continue as high as this for several days. It is because these symptoms are so common, and so similar to what one has been accustomed to call influenza, that this name has been applied to the disease in the case of the cat. It will, however, perhaps be safer to use the term distemper, because this rather emphasizes the seriousness of the disease. If one has kept dogs one appreciates fully the possibility of serious and fatal complications which result from distemper.

In the gastric type of distemper there is usually much sickness and diarrhœa, and it is because of this that strength is lost much more rapidly than with the other types.

Although distemper must always be regarded as serious, the death rate is usually very low, and most patients can be restored to health and strength with good nursing. It is rather surprising, yet it is a fact, that young kittens usually recover and the occasional deaths are of older cats.

As soon as distemper is suspected M & B 693 should be given, and the initial dose must be four $\frac{1}{8}$-gm. tablets. It is unwise for the breeder to give a larger initial dose than this, but the

vet. will probably suggest a repetition of this dose after only a few hours. The sooner the treatment is started, the greater are the chances of preventing complications. It is the complications which kill rather than the disease itself.

Most probably the cat will refuse all food but will be very anxious to drink. A saucerful of water in which a teaspoonful of glucose has been dissolved should be provided. If this is taken, the glucose will help to maintain strength, as no attempt at forcible feeding should be made for at least forty-eight hours. It is, however, wise to limit the quantity of water which can be taken at any particular moment.

The vet. will decide how long the M & B is to be continued and what other medicines, if any, should be used. In practice, however, it will usually be found that the sulphanilamide drug, combined with a period of starvation, will hasten the approach of convalescence. The remarkable fact is that the sulphanilamides can have no effect on the virus causing the distemper, yet they perform a valuable function in checking those bacteria which often cause the fatal complications.

If the instructions on Nursing are carefully followed there will be small risk of complications, but progress is bound to be slow, and it is foolish to try to hasten this, for a relapse, particularly in gastric cases, must be avoided.

Many cats which recover have some permanent damage to show as a result of this complaint. Chronic catarrh and ulceration of the eye are complications which do not kill but which may cause trouble for the remainder of the cat's life.

There is no guarantee that a cat which has suffered from distemper will not develop the disease again, as no permanent immunity seems to result from an attack, although there is very little risk with animals which are constantly in contact with possible infection. Such animals gradually develop their own resistance to certain specific diseases.

Dribbling

Sometimes a cat seems unable to cope with the flow of liquid into the mouth from the salivary glands. This may be due either to the production of an abnormal quantity of the fluid or merely to the inability of the animal to swallow in a normal manner.

The most usual cause of dribbling is inflammation of the gums, produced in many cases from an excess of tartar on the teeth. When the gums are inflamed it is quite normal for the salivary glands to be excessively stimulated and to produce a quantity of

fluid with which the animal cannot deal. The saliva trickles out of the corner of the mouth and stains the fur on the chin. Inspection of the inside of the mouth will either prove or disprove the existence of gum inflammation. When making such an inspection the teeth should also be carefully examined, for the pain of a decayed tooth might produce the same result. Cats, however, are rarely troubled with tooth decay unless they are old. When the gums or teeth have been attended to the trouble usually ceases at once.

Cats are very remarkable creatures in the lengths to which they will go to avoid pain. It is because of this fact that dribbling may be a sign of sore throat. The cat will not face the pain produced by the act of swallowing, and consequently allows the normal flow of saliva to trickle from the corner of its mouth. When, however, sore throat is a primary cause the cat will for the same reason refuse food. When this is the case the advice of a vet. should be sought, as the sore throat may be an early symptom of influenza.

Foreign bodies in the throat or mouth are liable to cause dribbling, but when the obstruction has been removed the trouble will immediately disappear.

The pain and swelling caused by the sting of a wasp or bee will immediately produce a copious flow of saliva, which the cat releases from its mouth as it tries to reach the affected part with its paw. When this is the cause of the trouble excessive salivation rarely lasts for more than a few minutes.

Finally, one sometimes meets with the case in which dribbling is caused by a vivid expectation of food. In dogs this is quite common, although very rare in cats. It would seem that a cat's " mouth will water " even as some humans confess to a similar experience. It is, however, a most unpleasant habit and therefore it is fortunate that it is rarely encountered.

Dual Mating

The question is sometimes asked whether it is possible for a queen who has been mated by two different studs to produce kittens from both sires. Reports of such dual matings and their consequences are usually only received at third hand, and litters of mixed kittens are not seen.

After all, it is a question with only academic interest, for it is difficult to imagine any reason for wishing kittens to be sired in this fashion. On the face of it there seems to be no reason why such dual matings should not produce kittens, provided that the second mating follows soon after the first.

Dual mating is certainly possible with rats. Dr. Hagedoorn, the eminent Dutch geneticist, in his book " Animal Breeding ", says in the chapter dealing with telegony, " With rats, it is possible to mate one female with two males and to obtain mixed litters from two fathers. Even here, however, not the slightest evidence was ever seen of an influence of these young upon each other."



Photo : F. Futcher and Son

BLUE POINT SIAMESE

MISSELFORE BLUE PRINT

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Ears

See Canker and Abscesses.

Earth Box

See Sanitary Tray.

Eczema

Eczema fortunately is not a very common complaint among cats, yet it cannot be considered as being of rare occurrence. Sometimes it happens that a particular breeder finds that a number of his cats are affected, while at another cattery where many cats are kept, not one of the animals may have this skin complaint.

It might appear that where several animals living together are all suffering from the complaint the disease must be contagious, and yet against this one has to put the fact that sometimes it may be only one out of seven or eight which is attacked. The actual fact is that eczema is not contagious, and there is no risk either to other inmates of the cattery or to the attendant.

Food apparently is in some way the cause of this blood disturbance, and if a cattery has a number of cats affected, a complete change of diet may bring about a rapid improvement, and this change may also prevent a recurrence of the trouble. Naturally it would be far better if one could find the particular food, or groups of food, which were responsible, but that is beyond the range of skill of the ordinary cat breeder, and veterinary science alone can discover the essential facts.

When a cat suffers from eczema it is quite likely that certain of the organs connected with the process of digestion are not functioning normally, and as a consequence one particular item of diet is not being dealt with adequately. This affects the blood stream and causes the irritation which, from the appearance of the skin, is then recognized as being eczema.

Thus, as one is much more interested in prevention than cure, it is essential that one should take every care to see that the cat is fit. This condition presupposes adequate exercise and a

balanced diet. If the diet is monotonous, due to the fact that all meals are the same in essentials, there is a distinct possibility that there will be an accumulation of those substances in the blood which may cause eczema. A varied diet, provided that the bowels are functioning normally and there is no trace of constipation, will prevent the accumulation of these undesirable substances in the blood stream.

There are two distinct types of eczema—wet and dry—and both are equally difficult to clear up. One of the greatest problems with which one has to cope is the fact that the irritation causes the animal to scratch, at times producing an open wound. When, however, the irritation subsides, the scratching will usually stop, but it is much more difficult to prevent the cat from licking the inflamed part. The roughness of a cat's tongue is such that it prevents healing, and it may be necessary to fit a cardboard collar so that the back and sides, the parts usually affected, cannot be reached.

The skin should be dressed with some soothing preparation in either powder or ointment form, but if the eczema is of the wet type, a lotion may be more easily applied. Calamine is a soothing application, and zinc ointment will also produce beneficial results.

The cure can thus be dealt with from several angles. In the first place there must be a radical change of diet, at least as a temporary measure, and at the same time treatment of those parts of the body where there is inflammation and discomfort. Finally, mild purgatives must be used over a period to ensure that the system is cleared of all impurities.

Unfortunately cure is rarely permanent, for cats which have once suffered from the complaint seem in the future to be susceptible to it. If, however, the time comes when the specific cause of the trouble for a particular animal can be found, then it will be possible to prevent any further attack. At present the research needed for such accurate diagnosis would be too expensive for the ordinary breeder.

Electric Shock

Kittens occasionally suffer from electric shock due to their habit of biting things in play. The greatest danger exists with flex which runs to table lights or wireless sets, as occasionally a kitten will bite through such wires. Normally the shock would throw the animal clear of the wire, but if this has not happened considerable care must be exercised before the victim is picked up. Rubber is the safest insulator, and if one puts on a pair

of wellingtons there is little danger when the animal is pulled away from the wires by using the crooked handle of a walking stick.

As in all cases of shock, rest and warmth are the best remedies. Food and drink are rarely taken by animals which are suffering from any form of shock, and thus stimulants can rarely be given. Should a stimulant be really necessary, the vet. would provide this by injection.

Emetics

See Poisoning.

Enteritis

See Infectious Enteritis.

Entries, Show

See Show Entries.

Exercise

One cannot emphasize too strongly the need for allowing cats to take plenty of exercise, for no animal can remain in sound condition if exercise is denied. It is natural for a healthy animal to eat well and then to sleep, but once this digestive stage has passed, then exercise is an urgent need of the body.

Young kittens which are kept confined to a small space indoors cannot develop healthy bodies, and in the first few weeks of their lives their natural stamina may be destroyed, and a heritage of weakness left to them for the rest of their lives. No matter how good the diet with its vitamins and mineral salts, its meat and its milk foods, these will not be assimilated to form a strong body unless exercise in the fresh air is added to them.

For most animals, as for most humans, exercise in time becomes a matter of habit. The natural inclination of all young things is to play and romp and give exercise to muscle and bone, and while they are still very young the space provided by a well-ventilated room into which the rays of the sun can reach is ample. When they are older this space within doors is inadequate, and they must be provided with far wider ranges outside. If this is not done the animal becomes lethargic and lacking in interest. It eats well and sleeps well, and soon develops a grossness of mind and body which disinclines it from all serious physical effort. Such an animal usually becomes fat, and its natural functions become sluggish. This in turn gives rise to a whole chain of physical ills which can only end in an earlier death than is necessary.

The animal which is allowed a large measure of freedom, and can take exercise at will, is a far more interesting creature. It possesses an alertness of mind and body which gives considerable pleasure to its owners. Cats were not intended to spend their lives in idleness on silken cushions, no, not even pedigree cats.

If left to its own devices a cat will rarely take exercise to excess, but the owner must be careful at certain times in the life of the animal. For example, a kitten will often continue to play far too long than is good for it if it is excited by some interesting plaything held by the owner. When left to itself it will cease its game as soon as it is tired. No kitten should be allowed to overtire itself.

Pregnant queens should also have their exercise kept within rational limits. A female heavily in kitten rarely wishes to walk far abroad, but some of them whose spirits are in no way depressed by prospective motherhood, and who want to climb and run as though they had no maternal responsibilities, should only be allowed out for short periods during the later stages of pregnancy.

Invalids, also, must in the matter of exercise be treated with a great deal of understanding; their activity must be limited according to their strength, and owners must bear in mind, too, the conditions of weather which exist outside.

Experience will soon show the novice the value of exercise to his animals, and he will quickly learn the type and quantity they need, always provided, of course, that he takes an intelligent rather than a casual interest in his livestock.

Exhibiting

The vast majority of people who keep cats, even pedigree cats, rarely exhibit them for competition at shows. They derive their pleasure from the company of the animal, and many of them are not even tempted to become breeders. There are, however, a number of breeders who obtain much pleasure from the successes of their animals on the show bench. There is certainly room for both types of owner in the Cat Fancy.

Sending cats to shows always entails a certain amount of risk, for when a large number are collected together under one roof there is always a danger that some of the animals are suffering from infectious disease. Even when the greatest care is taken by all exhibitors to see that no animal is sent to the show unless it is perfectly fit, there is always the stray chance that a cat may not have shown symptoms of trouble until after it has been in contact with other exhibits. In that case the damage



ON THEIR BEST BEHAVIOUR

is done and there may be heavy losses, particularly among the kittens who by reason of their youth have had no opportunity of building up natural immunity to any disease.

One cannot emphasize too strongly the moral obligation which rests upon exhibitors to ensure by every possible means that they are not introducing disease to a show. It is quite natural, when entrance fees have been paid, that one should not wish to lose these by keeping at home animals which have been entered, but the loss of a few shillings is trivial to the loss of stock which sometimes occurs after a show. When a cattery has been visited by infectious enteritis or influenza, no animal from that cattery should be shown until a vet. has stated that all danger of passing on the disease is over. If there has been a death in the cattery and the cause of the death is unknown, it is only fair to assume that there is danger until the good health of the rest of the animals proves the suspicion to be unfounded. An exhibitor should never show a cat about whose fitness he has the slightest doubt. Few breeders would care to submit any animal for which they felt affection to the dangers and strains of a show unless they were convinced that it was absolutely fit.

When cats arrive at a show they are all inspected by a vet., and unless passed by him are not eligible for competition. Any cat rejected in this way should immediately be placed back in its basket and removed from the room until the time that it can be taken home. No precautions can be too great. Although the vet. may at times reject an animal which is in fact not a general danger, one must accept his judgment with a good grace. He has a definite responsibility, and if he is wise he will err on the side of extreme caution. Disappointment must never lead the exhibitor to feel that there has been unfair treatment merely because there has been a decision with which he does not agree.

In the same way, when the exhibits are judged, the decision of the judge must be accepted without question and also without complaint. In the Cat Fancy, as in all livestock hobbies, there are good and bad sportsmen, but fortunately the good far outnumber the bad. It is so easy to feel that the particular animal which one has shown is better than some other animal which has beaten it on the show bench, but pride of ownership is apt to bias judgment. Judges are usually breeders of wide experience themselves, and can be relied upon to judge the exhibits on their merits. To quarrel with that decision, even if one honestly disagrees, is a sign of bad sportsmanship. When judging is

finished it is permissible to ask the judge to point out the faults he has found in the cat you have shown, but there must be no hint that this decision is not freely accepted.

To suggest to other exhibitors that the judge is unfair and makes his awards because he knows the owners of the cats or because he receives some bribe is unpardonable. Such gossip on one occasion led to a case in the High Court. Such episodes are bad for the Fancy, but fortunately they are of rare occurrence. Many novices have been helped along the road to success by judges who were willing to teach them.

Eyelashes

See Inturned Eyelids.

Eye Ointments

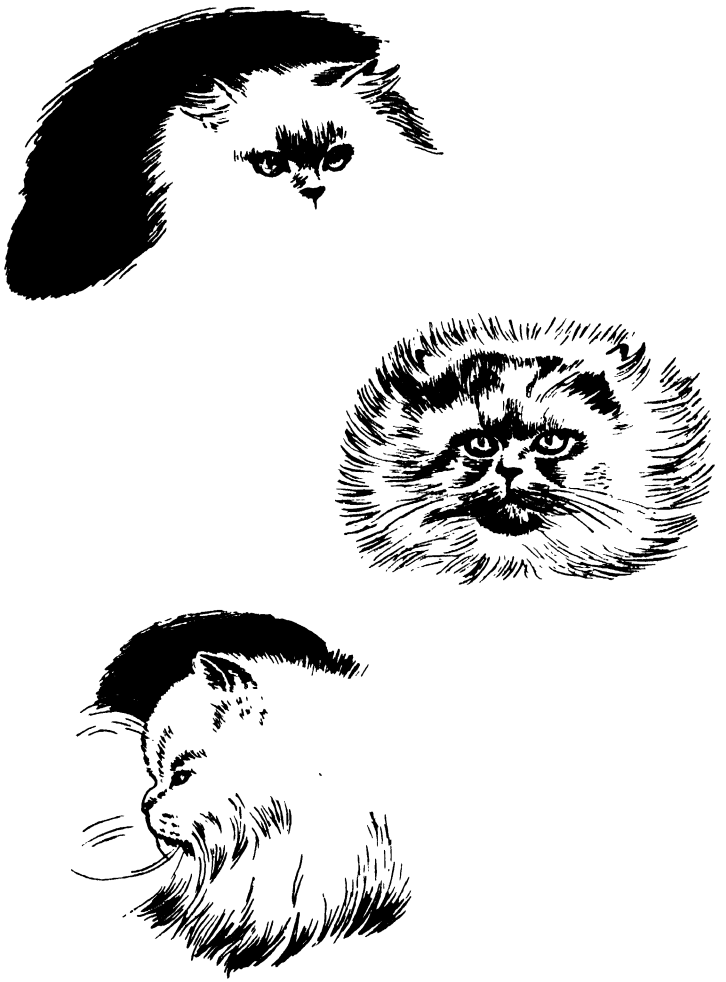
See Eyes.

Eyes

A kitten's eyes are extremely sensitive when they first open between the seventh and tenth day, and it is most important that they should be gradually accustomed to full light. It is for this reason that in the section dealing with kittening stress has been placed on the position and arrangement of the box in which the litter is to be born.

Usually the eyes will open without assistance, but quite often one will find that one or more eyes in the litter do not seem to open fully. They appear stuck at one corner ; usually an outside corner. When this is noticed after the time when the eyes should be fully opened, one must act immediately or there may be danger of permanent damage. On inspection one usually finds that there is a hard yellow crust at the corner. This can be quite easily removed by careful bathing with a small pledget of cotton wool moistened with warm water. It may be necessary to part the lids by the use of gentle pressure, but if possible this should be avoided. Certainly for the first two or three treatments no attempt should be made to open the eye. Once the lids are free it will be seen that the eye itself is perfectly normal. If such is the case there is no need for anxiety, although it may be necessary to continue the treatment for several days before the eyes remain open quite normally.

Sometimes, however, one meets with a much more serious condition with young kittens. Not only are the lids caught at the corners but they remain closed along their whole length. The rim of the eyelid appears inflamed and there may be an



TYPE IN LONG-HAIRS

unpleasant discharge. The trouble in this case is probably a form of conjunctivitis, and unless great care is taken infection will pass to all the kittens, not only of that particular litter but also of any other litters with which the attendant may be dealing. The danger in this case is that if the inflammation cannot be cleared quickly, then the pupil may be damaged. If this does happen the kitten will have to be destroyed. Bathing with a

mild antiseptic lotion is an important part of the treatment, and this will have to be done four or five times during the day. Occasional and spasmodic treatment is of little value. It must be stressed that one pledget of cotton wool may be used on one eye only. All used cotton wool must be carefully collected and burned. After bathing, the lids should be smeared with Albucid ointment, which sometimes works an almost miraculous cure within forty-eight hours. One cannot expect such quick results as a general rule, for this condition often requires considerable perseverance on the part of the attendant before the eyes and lids are normal.

Once this early form of conjunctivitis has found its way into a cattery, it is most difficult to eradicate. One must certainly be prepared to see cases occurring throughout the whole breeding season, despite every attempt on the part of the owner thoroughly to disinfect the premises. Sooner or later it appears in most catteries, and then may not be experienced again for a number of years.

Conjunctivitis is not at all uncommon with older kittens and even full-grown cats. At times this infectious complaint would appear to be wind-borne. The lids become inflamed and there is a discharge of pus which, when it dries, sticks the eyelids together. The ball of the eye may also become inflamed, and it is not at all unusual for the haw to become exposed. Bathing, as in all cases of eye trouble of this type, is to be recommended, and Albucid ointment should be applied inside the lid, and then, by drawing the lids together, spread over the membrane which lines the lids. In very obstinate cases Thiazamide eye ointment has sometimes produced a cure when all other remedies have apparently failed. This sulphonamide ointment can only be obtained on the prescription of a vet., but it may be of the greatest value if it can be obtained. With its use, in a very short time the irritation which causes the cat constantly to rub its eyes disappears. Naturally a cat cannot realize that this constant rubbing only makes the trouble worse.

A much less serious and more frequent trouble is an ordinary cold in the eye. Kittens, and even grown cats, seem to derive a good deal of pleasure from trying to look under doors or from investigating the phenomenon of a draught, with inevitable consequences of such curiosity. Bathing with warm water in which boracic powder has been dissolved usually produces a cure in a few days.

Cod liver oil smeared on the lids is sometimes recommended for inflammation, but with long-haired cats it is almost certain

also to produce an unpleasant appearance of coat. A cat seems capable of transferring the oil to many parts of its body.

All breeders experience these eye troubles from time to time, but when they are dealt with as soon as they are noticed, cures are not usually difficult.

F

Fæces

Observation of the fæces can be very helpful when attempting to diagnose various forms of digestive disorder. Undue attention should not be paid to their appearance or form unless more than one motion of the bowels is concerned, for a variety of trivial causes may produce one motion which in appearance is very different from normal. This variation would then have little significance. When a cat is fed on a diet largely made up of meat, the fæces are dark brown in colour, and this colour should always be regarded as the standard for comparison.

When there is diarrhœa the passage of food through the intestines is too rapid for the usual changes to take place in colour and consistency, and as a consequence the motion is yellow and watery. The colour here is due to bile, and the watery consistency results from the fact that the large bowel has not had sufficient time to extract the water from the fæces. In such circumstances it is usual to provide medicine containing bismuth in an attempt to soothe the membranes. This substance will immediately change the colour to black, although the consistency at first may not be altered.

Constipation is often shown by the fact that the motion is broken up into small pellets which are sometimes covered with mucus, and may present a highly polished appearance. It is not uncommon in constipation for the greater part of the excreta to be solid, but to be accompanied at the same time by a liquid portion to the motion.

After an illness digestion frequently takes some time to adjust itself to a normal intake of food, and during the first few days the fæces may contain obvious pieces of undigested food. This must be taken as a clear sign that the diet being given is not suited to a convalescent, and a lighter diet must be provided. Whenever diarrhœa is present there is always a definite likelihood that the food will pass along the digestive track too rapidly for complete digestion. It is this cause which often produces fæces containing undigested food.

Many other colour distinctions and differences in consistency could be enumerated, but their implication would be beyond the knowledge and experience of most breeders. The significance of such details must be assessed by the medical practitioner, and it will be helpful to him if he can be shown a sample of the motion when a cat is obviously ill.

False Pregnancy

After a mating it sometimes happens that a queen shows all the usual signs of being in kitten although such is not actually the case. There is no simple method by which the novice can tell whether pregnancy is true or false, although with practice the experienced breeder can sometimes feel each separate fœtus towards the end of the fourth week of pregnancy. At this time the embryo seems to be a rounded object about the size of half-a-crown. As, however, the appearance of the cat seems normal for an "in kitten" queen, and false pregnancies are rare, it is unusual for the breeder either to suspect or make any test for such a misfortune.

This false appearance of pregnancy rarely lasts the full time of the normal gestation period, and towards the end of the seventh week the queen may produce a bladder filled with liquid. If the owner sees this happen he will know the cause, but it is more than likely that the cat will have removed all traces before she has been noticed. What will be clear is that the queen no longer appears to be in kitten.

In cases of false pregnancy the obvious signs are that the litter is going to be a small one, as although there is some slight swelling of the flanks, this is not as marked as one would expect with a normal litter of four.

After a misfortune of this kind the cat usually seems perfectly fit, and will probably call again in the course of a fortnight or three weeks. If, however, the animal should appear unfit, a vet. must be asked to make an examination.

Fatness (Obesity)

Some cats are inclined to become overfat, a condition to be avoided. It is quite a mistaken idea of kindness to feed cats with titbits from the table, whereas regular meal-times and a well-balanced diet will keep most cats in fit condition. Fitness implies freedom from surplus fat. A diet which is rich in sugars and starches is not to be recommended, for these are the very substances that cause the trouble. Unfortunately the fat which one sees with the eye when looking at a cat is not the fat that

causes the real harm. Any animal that is really fat surrounds its vital organs—heart, kidneys and liver—with fatty tissue, and it is this which causes degeneration of those organs. Degeneration in this case means ill health and premature death.

Particular care has to be taken with the diet of females that have been spayed or males that have been castrated. Correct metabolism depends upon the efficient functioning of certain glands of the body, and in the case of animals which have been operated upon to prevent the normal functioning of their sex organs, certain glands cease to function. Thus metabolism is not normal, and unless diet is carefully planned, fatness follows. A diet largely composed of " red meat ", and an abundance of exercise, will usually prevent ugly and dangerous obesity.

Fats

See Feeding.

Feeding

Probably there is no subject connected with the breeding and rearing of cats which produces more controversy than the subject of feeding. One well-known breeder will be convinced that milk is an essential part of a sound diet, while another, who is equally successful, will assure the purchaser of a kitten that milk should be avoided at all costs as it is the source of most fatal kitten ailments.

The novice is thus presented with what appears to be a flat contradiction on the subject of milk, and the more he reads on the subject of feeding in general, the greater will his confusion become, for milk is by no means the only article of diet over which there is a wide divergence of opinion. Actually, however, the matter is not as difficult as it sounds, for the cat is a most accommodating creature in the matter of food.

When a breeder states categorically that milk is dangerous to cats, this statement really means that he has found that from his own experience trouble has resulted from its use, and it is only natural that he should avoid any article of diet producing unhappy consequences. Quite probably, if milk were again used at a later date in very small quantities, and then gradually increased, there would be no ill effects. A golden rule in the feeding of all livestock is to make sure that new articles of diet are always introduced in the smallest quantities and mixed with food which one has learned from experience suits the animal well.

It is unwise to generalize on the subject of feeding, for cats are very similar to humans in their ability to digest certain foods,

and their inability to assimilate others. Some cats thrive on a diet which contains a large proportion of milky foods, while others are always "loose" when milk is fed to them in any quantity, however small. Other cats thrive on a diet which is made up almost entirely of meat, when no milk is ever given.

When a cat or kitten is purchased it is most important to follow closely the diet prescribed by the breeder from whom the purchase has been made, but it would be most unwise to regard this as the only satisfactory method of feeding cats. When the animal has settled down in its new home experiment can begin, and if all changes are gradual the animal can be accustomed to the diet which one considers to be both satisfactory and at the same time the most convenient to provide.

A most important point to remember in the feeding of animals is that meals must be given at regular times. Where feeding is haphazard, and meals are given just when one happens to remember them, condition is soon lost. One must work out a timetable convenient to oneself and then adhere to it. Successful rearing cannot be achieved in any other way.

From the age of ten weeks, when weaning has been completed, until about six or seven months, a kitten needs four meals a day, and a suitable timetable for these meals is, 7, 12, 5, 10.

The first meal of the day may be of a milky nature such as a cereal mixed with milk—some kittens like Oatrex, others prefer a breakfast cereal such as Force mixed with milk. Quite probably one will find it convenient to alternate these foods, and sometimes even to give milk alone. In this matter experience is the only safe guide. Most cereal foods are inclined to be laxative, but this tendency can be checked if arrowroot is added to any milky foods given. It is also a good plan to omit sugar from these milk meals.

The midday meal is one of the main meals of the day and will consist of meat and vegetables which will naturally vary from day to day.

The quantity given at this meal will be gradually increased as the kitten grows, for the needs of a ten-week kitten are much less than when it is six months old. Food is required not only to maintain bodily strength, but for the first twelve months at least rapid growth has also to be aided by increased feeding.

At ten weeks a heaped tablespoonful may be sufficient, but this quantity should be increased to as much as 2½ oz. when the animal is six months old. Males require more than females, as their body size is larger, and usually their rate of growth is more rapid.



WHEN IS THE NEXT MEAL?

Kittens, if healthy, have very keen appetites, and approach their food with a zest which needs a certain amount of control. They always seem to be afraid that they will lose part of their meal if they do not eat it in record time. Bearing this fact in mind each kitten should have its own separate dish at each meal.

When a kitten is ravenous for its food one should carefully consider whether this is just the nature of the cat, or whether it is that management is at fault, or that there is some other reason to account for excessive hunger.

Although far more harm is done to kittens by overfeeding than by the reverse, one should certainly see what effect is produced by increasing the size of the meal, and if, after this is done, appetite is still keen but not ravenous, a solution will have been found. When, however, one is convinced that the size of the meal is adequate, and yet the kitten is always hungry, even between the normal feeding times, and in spite of this appetite does not put on a lot of flesh, one should then suspect worms.

Some kittens are just greedy, and most Siamese are notorious offenders in this respect.

It is a good plan to remain with a kitten while it is eating its midday meal, for one can then check it if the meal is being eaten too quickly. By taking the saucer away from time to time there will be an opportunity for some food to reach the stomach while the œsophagus empties itself. When kittens "wolf" their food one of two misfortunes usually happens. Either the animal suffers from flatulence for a considerable period or the whole meal is returned as soon as it has been eaten. When the latter alternative takes place, the animal should be allowed to rest for a short while, and then a small meal can be fed by hand, a piece at a time.

There is no need to be disturbed because a kitten does not masticate its food, for that is not necessary for sound digestion in cats. Provided that the food has been bitten into pieces small enough to be swallowed, the entire process of digestion takes place in the stomach and intestines.

It is quite a good plan to give a meat meal sometimes consisting of pieces so large that they cannot be swallowed. A solid lump of meat cannot be bolted, and the animal is bound to bite it. This provides excellent exercise for the jaws, and ensures also that a reasonable time is taken over the eating.

It has been suggested that the food given to kittens should all be passed through a mincer, and that the size of the cutters used should be regulated according to the age of the kitten.

There is apparently only one advantage in preparing the food in this way, and that is that it will prevent the animal from picking out what it likes, and leaving what it should also eat but does not find appetizing. Cats as a whole, however, do not appreciate a meal which is presented in this form. It is far better to give them something which they can swallow, and if appetite is naturally keen they will also eat those items of the meal which are not so palatable to them.

The remaining two meals of the day should in make-up be similar to those already described, although the evening meal will be more appreciated if it is not a mere repetition of that given at midday. Variety does much to whet appetite, and a dull, monotonous sequence, even of favourite foods, will soon blunt the edge of the keenest hunger.

No food should be given between meals, and no titbits from the table should be allowed. Many kittens like bread and butter, and jam and cake, but would keep in far better condition if they never learned these little parlour tricks. A human being has some right to ruin his digestion if he wishes, but there is not the slightest justification for teaching a cat to become equally self-destructive.

Feeding Dishes

Considerable care should be shown in the choice and care of the dishes used for feeding, as an unsatisfactory receptacle for food or milk may produce unhappy consequences.

Some fanciers believe in the use of enamel dishes, and these have much to recommend them provided that they are discarded as soon as the enamel becomes chipped. With care such dishes should last a long time, but sooner or later pieces of enamel will be broken off, and the metal beneath will rust and may become a breeding ground for bacteria unless the dish is carefully washed with boiling water after each meal.

In the average household cups are broken more often than saucers, with the result that there are usually many saucers in excess of the daily needs. These will make satisfactory feeding dishes for the cats, with the great advantage that china is easily washed and disinfected. Even with saucers, however, one should discard them when they are chipped, and this, under normal conditions, is not expensive.

China and enamel are the only materials which can be safely used, and plain metal and wood should always be avoided. Scrupulous cleanliness in the matter of feeding is one of the essentials for successful kitten rearing, and neglect to wash the

dishes regularly after each meal is carelessness which tempts providence.

It is far easier to kill kittens by neglect than it is to rear them.

Feet

See Grooming.

Fever

See Temperature.

Fish

Fish is an excellent food for cats, but contrary to popular belief some cats do not like it. Gray's question, " What cat's averse to fish ? " would in most catteries find some ready replies. Some cats will never look at a fish meal, while few of them are prepared to eat it for several meals in succession.

Although it is a good food for general use as part of a varied diet, it does not seem to satisfy as long as a meat meal. Consequently it is a good plan to use it for the earlier main meal in the middle of the day. Growing kittens in particular need a meal at night which will last them until the morning, so that they are not frantic for food when the normal small breakfast arrives.

Any kind of fresh fish is useful, but cured and smoked and certainly salted varieties should be avoided. Some fanciers feed fish raw, but it is the exceptional cat that appreciates this. When cooking fish it should be steamed or boiled, but never fried, as too much fat is likely to upset kittens. As a general rule it is appreciated much better when it is fed moist and not dry. To produce this condition steaming is the best method of preparation.

Great care must be taken to see that all bones are removed before fish is given, as fish bones are very sharp. It is not uncommon for a bone to get wedged in the mouth or across the throat, where the sharp edges can cause considerable damage.

Boiled cods' heads are very cheap to buy, and if well boiled the flesh can be easily separated from the bones. This fish, if mixed with brown bread, is both nourishing and fattening, and is thus excellent for growing stock, but should not be given to cats which are already overfat.

Fits

Adult cats are very rarely subject to fits, but this distressing symptom of some hidden cause is more common among kittens.

It is difficult to describe a fit as the actions performed vary from time to time even with the same individual.

In one type probably the term " hysteria " would be better than "fit", for the animal seems to lose control of its muscular reactions, and at the same time cries as though in pain. It may for a few moments rush about madly, and then fall on the floor with all four legs working violently. During the first part of the attack the animal seems to be perfectly conscious, but after it has collapsed, temporary unconsciousness may follow.

In another type the kitten suddenly starts to cry, and then stands for a moment perfectly rigid. After this it falls to the ground with the legs kicking spasmodically. After a few minutes it seems again to be perfectly recovered, and shows no sign of the attack.

The breeder should not attempt treatment other than providing the kitten with quietness in a darkened room. If medicine is to be given, this must be prescribed by the vet., who will first endeavour to find the underlying cause.

There are probably many possible causes for fits, but in most cases these can be reduced to a possibility of two. They are worms and teething. If worms are known to be present these must be removed. It is then more than likely that there will be no further trouble. If difficulty with teething is at the root of the disturbance, the cure may naturally take longer, but if the mouth and gums are carefully bathed with disinfectant, and the bowels are watched for normal functioning, improvement should be gradual and continuous.

In a few cases the fits may continue for some time after the cause has been removed, but the frequency and violence of the attacks will gradually grow less.

With a precocious maiden queen a somewhat similar form of hysteria is sometimes encountered, although in this case the animal does not become unconscious. Such a queen should be mated at the first opportunity, and the trouble will probably end. If, however, mating makes no difference, a vet. should be asked for advice, as cure may then be very difficult, if not impossible.

Flatulence

See Indigestion.

Fleas

Fleas are often very unwelcome guests of the cat, particularly if it is one of the long-haired varieties, and every attempt should be made to free the animal from these parasites.

A cat infested with fleas soon gets into a very unthrifty condition, for these insects not only cause considerable irritation, which is damaging to the nervous system if long continued, but they are also blood suckers.

When a cat is seen to scratch frequently one should first suspect fleas as being the cause, although there are many other possible causes of skin irritation which would produce the same result. Close inspection will show definitely whether the animal is harbouring fleas, for these insects leave small, black spots as a sign of their presence.

Treatment is not difficult, and if one deals with the matter regularly there should be little trouble. There are, however, some cat owners who are so sure that their animals cannot possibly have fleas that they never bother to look. It would be much wiser to assume that all cats have fleas, and as a consequence of this belief to take precautions.

There are a number of powders on the market which are quite effective, but one must try to avoid those which stain the coat, as this may temporarily spoil the appearance of light-coated animals. A very popular insecticide before the war was Pulvex, while Messrs. Sherley also produced a powder which was equally effective. Both preparations are now again procurable. The powder should be well rubbed into the roots of the fur, and must be left in the coat for some time before being brushed out. Wherever possible this treatment should take place in the open air, for many of the fleas, if there are a large number, seem not to be killed by the powder, but they find it so objectionable that they prefer to leave the cat. Thus, when the treatment takes place inside, there is every possibility that they will endeavour to return to their former host as soon as possible. One treatment is never sufficient, and it is a good plan to dust the coat as a regular routine job every week or ten days.

The flea lays its eggs in the coat, but they do not hatch on the body, for they are dropped off when the cat moves. Fleas go through several stages of their life cycle before returning to the host again. Dust is a favourite medium in which the grub will develop, and for this reason not only the cat but all nooks and crannies where dust may collect in the cattery should from time to time receive a sprinkling of the powder.

When infestation is really bad it may be necessary to bath the animal, using soft soap and some disinfectant such as Dettol or Izal. One must be extremely careful not to add too much of the disinfecting fluid. By far the safest plan is to ask the makers what strength they recommend, for most of them have

carried out experimental work on this and allied subjects. To be effective the lather should remain in the coat for six or seven minutes, so every precaution must be taken to see that the animal does not develop a chill during this time. Bathing in any case must be regarded as exceptional treatment, and only to be practised in case of real need.

It is quite likely that new insecticides will replace those which were popular in pre-war days, but for some time the cat breeder would be wise to await the results of the experimental use of these new substances. D.D.T. and Gammezane have already been proved to be substances of extreme potency in killing insects, and it may well be that they will be used in small concentration in the insect powders of the future. Some powders, even now, contain a small percentage of D.D.T. Geigy.

Fleas seem to have a very strong dislike for paraffin, but this substance is very dangerous when used on cats or kittens. If one could be sure that the oil would not come in contact with the skin, it might be safe to wipe the coat with a paraffin rag. Kittens have had to be destroyed in the past because they were carelessly treated with paraffin, and it is, therefore, wiser not to use it at all.

The flea is certainly an unpleasant creature, and as in addition to its other vices it may also become the intermediary host of the tapeworm, it should never be allowed to thrive on cats.

Follicular Mange

See Mange.

Foster Mothers

Sometimes after kittening a queen is so ill that for a few days she is unable to suckle her family, or it may be that the birth is complicated, causing the queen to die while the kittens survive. In this event, if the litter is to be saved, there are only two possibilities. Either the family must be hand-reared or a foster mother must be found. From the breeder's point of view the second alternative is by far the more attractive.

On the other hand, some queens are remarkably prolific and have litters up to as many as nine kittens. When this happens the breeder is faced with a difficult situation, for quite apart from the monetary value of well-bred kittens, there is also the added difficulty that at a few days old it is almost impossible to pick out kittens which one can feel sure will be the outstanding ones of the family. To expect a queen to rear so large a family is unwise, for although she may rear them more or

less satisfactorily, the strain upon her is so great that it will be many months after she has left this family before she is again in breeding condition. The wise breeder will limit his queen to five kittens, and if she is likely to produce more than that number, will take the precaution of having a foster mother available. With large litters, too, there is always a danger that some will be overlaid by the mother.

It is not always simple to find a satisfactory foster mother, although at any one moment there must be a number of ordinary house cats in one's immediate neighbourhood which are in kitten. Suitability depends upon a number of factors, not the least of which is that the foster shall be as free as possible from parasites, both internal and external. It would be most unwise to accept for fostering purposes any animal which showed the slightest sign of skin trouble, as it would be an expensive experiment which introduced any form of illness into one's cattery.

If it can be arranged, the foster should be borrowed before she has her kittens so that she is already installed and accustomed to the place where she is to be used. Such a cat would naturally have to be confined or she would immediately return to her own home. Once the kittens are born, however, she is usually quite willing to stay where they are, though some cats will pick up their family one by one and transfer them over considerable distances.

Wherever possible a foster should be chosen who is due to litter down several days before the pedigree mother, for by the time the young aristocrats are born, the " ordinary " cat will have developed a copious milk supply.

For the first few days the actual mother should be allowed to feed her own babies unless there are so many that there is a serious risk that she will overlay some of them. With large litters, in a comparatively small box, that risk always exists, and wherever possible a larger box should be provided immediately so that the queen can lie away from her family. The kittens are quite capable of finding the mother when they want to feed. The early milk of mammals is usually very rich in calcium, and for this reason most valuable to the young, and that is the reason why, for the first few days, they should be allowed to feed from their own mother rather than from the foster, whose early milk has been fed to her own young. It is probably the best plan to carry out the transfer gradually, but it is not wise to move the kittens one by one, particularly if the pedigree cats are very different in appearance from those of the foster. An odd kitten in her litter may appear so unusual

that she will turn it out and refuse to allow it to feed. When there are several of these strange kittens which look alike, there is a very strong possibility that she will not be so concerned.

When the foster has left her kittens for a short time, one can remove several of her own kittens and replace them by some of those belonging to the pedigree queen. Bearing in mind the fact that the most acute sense of the cat is smell, one should rub the hands over the kittens which belong to the nest and then rub them over the new arrivals. In this way all should smell alike when the absent mother returns to the family. It is wise to be on hand when she does return to see whether she notices the change and also to observe her reactions. Rarely is there any difficulty. If two kittens from the pedigree litter have been transferred, a similar number of the foster's own kittens should be removed. In fact, if it is decided that the foster is to be asked to rear four adopted kittens, it is a good plan to reduce her own family at birth to this number if she



A PERSIAN OF QUALITY

has a larger litter than her future family is intended to be. It is difficult to express an opinion on the ability of a cat to count, but anything which might unsettle her should be guarded against. A few hours after the first change-over has been satisfactorily accepted, the remainder of the kittens to be transferred can be given to the foster.

One great advantage with fosters is that, generally speaking, they usually produce a much more plentiful supply of milk than pedigree cats, and can often continue to feed the kittens for several extra weeks. Occasionally the milk of a foster will upset

the adopted kittens, but this rarely has any serious consequences when the exchange is made on the third or fourth day.

If the family is very large, two fosters may be necessary, for it must always be remembered that house cats are usually smaller than pedigree cats, and consequently pedigree kittens demand more feeding than the foster's own kittens would need. A foster with only two adopted kittens has an easy task, and usually she does it extremely well.

In cases of emergency a foster may be asked to take kittens a few days old even when her own family has been born for several weeks. One would not choose to adopt this method of fostering, but occasionally it is necessary. In these circumstances the foster will often rear the new family, but they seem not to make the same progress as when a normal fostering is attempted.

Fractures

Although it is well within the scope of the experienced breeder to deal with simple fractures, it is most unwise to do more than immobilize the injured limb unless one has had a good deal of practice with successful results.

It is extremely rare for a cat to break a limb as the result of a fall, and when breaks do occur they are usually the result of violence. A heavy object may fall on the leg and break it, or the animal may be run over by some vehicle.

A fracture in the foreleg usually occurs between the elbow and the knee. In this case there is considerable pain, and swelling rapidly appears in the neighbourhood of the break. This gradually spreads along the whole leg. If one merely intends to immobilize the limb until the arrival of the vet., the leg should be covered with cotton wool and then four wooden splints not more than ½ inch wide should be firmly bandaged round the leg, taking care that the whole length of the leg is firmly held. Bandaging should never be so tight that circulation in the limb is arrested. The back leg may be treated in the same way when the fracture is below the thigh, but probably four splints here will be found too many and two will be sufficient. If, however, the thigh bone is broken it is quite impossible to use splints at all.

Having provided this first-aid treatment the animal must be prevented from moving until the vet. arrives, although most four-footed animals can walk reasonably well on three legs. The vet. may decide to use plaster when the bone has been set. In this case splints will no longer be required, and it will be necessary

merely to restrict the animal's activity until the ends of the bone have started to knit. Before the bone has formed a complete callus as much as a month may elapse. Naturally during that time the cat will be discouraged from any form of violent activity. After plaster or splints have been removed there may be lameness for several weeks, but this will gradually disappear. Such lameness is due to the condition of the muscles which have not been in use for some time.

A fracture of the thigh is perhaps not so serious as it sounds, for the muscles here are so well developed in the cat that they usually hold the two ends of the bone firmly in position. Rest will provide the cure.

If a cat is run over it is not unusual for one or more ribs to be broken, and here again the use of splints is hardly practicable. Provided that no damage to internal organs has been done by the broken ends of the bone, little treatment is necessary beyond ensuring that the cat is kept in an enclosed space and encouraged to rest as much as possible. Broken ribs are painful, but animals soon learn to lie in a manner which does not produce pain.

A tail is sometimes broken when it becomes caught in a closing door. In this case short, wooden splints may be used, or one may bind the tail firmly with bandages soaked in acacia gum. Healing is usually rapid, and apart from a slight thickening where the break has occurred, there is usually no permanent sign of the damage.

Although a fracture is rare, this condition should always be suspected when the cat is unable to use a limb.

Frill

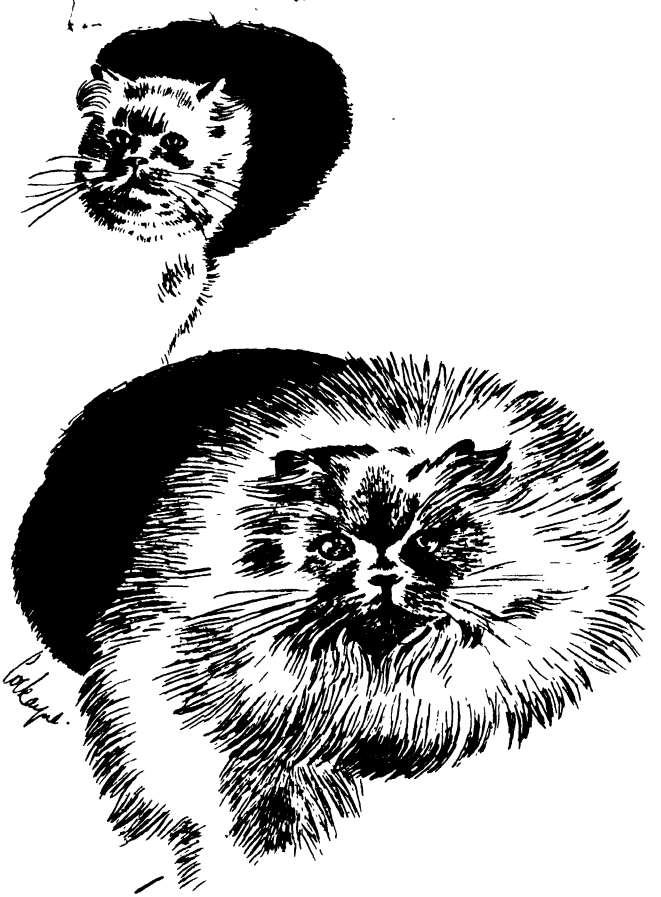
The term " frill " is the name applied to the hair which stands up all round the cat's head. It is quite surprising the difference which a good frill can make to the appearance of an otherwise indifferent specimen, for it will make the ears appear smaller, and will impart an appearance of great solidity and strength to the head generally. So important is the frill that it might well make all the difference on the show bench between two animals which had little else to separate them.

The frill, as one sees it on a show cat, is not natural in the sense that a good deal of care must be shown right from the stage of kittenhood to produce a first-class frill. Normally, if the kitten is groomed from the head to the tail, the fur will lie flat on the shoulders and will not frame the head. Thus, as soon as grooming starts, the fur on the front and back of the neck and shoulders must always be brushed and combed in

the direction of the head. If this is done, then when the adult moult arrives the hair will have been trained to stand forward, and [illegible] will be the direction of the new frill. If this is not do[illegible] from the time the kitten receives its first grooming, n[illegible]unt of training will produce quite the same result in [illegible].

Fur

See Coat [illegible] Ball.



THE BEAUTY OF A FRILL

G

Gastritis

Gastritis is quite likely to be the sequel to a long history of indigestion, for it is merely the result of inflammation of the mucous membrane of the stomach.

One of the first signs of the trouble is frequent and violent vomiting, and in extreme cases the ejected contents of the stomach will be stained with blood. More often than not this mild hæmorrhage is due to slight laceration of the gullet and is not connected with the condition of the stomach membranes. Sometimes the vomiting is also accompanied by diarrhœa, but this need not be the case. In fact, when indigestion is of long standing, constipation and diarrhœa may alternate.

When suffering from gastritis a cat shows little or no desire for food, and for the first twenty-four hours at least no attempt should be made to tempt it. Thirst will be marked, but in acute cases the animal is not able to retain even the water it drinks.

The first object, therefore, must be to stop the vomiting, as this will continue long after all food has been ejected, and the loss of fluid, in addition to the strain of retching, may soon render the animal prostrate. A teaspoonful of brandy and warm water in equal quantities is often found soothing, and if this is given every hour energy is maintained and the sickness will probably cease. White of egg can also be tried, but some cats seem to dislike this. If, despite all attempts to stop it, the sickness persists for more than four or five hours, the assistance of a vet. should be sought.

Once recovery starts it is usually continuous and rapid, but diet must of necessity be light for some days. Steamed fish of the fine-grained varieties is often appreciated, and does not impose as much strain on the digestion as meat would do. The quantity of food must be regulated by the intelligence of the breeder and not by the appetite of the cat.

Although gastritis is often the sequel to a history of indigestion, there are a variety of possible causes.

Worms which find their way into the stomach from the intestines will, if in sufficient number, set up inflammation, or any

foreign body which has been swallowed and remains in the stomach will produce the same effect. This mechanically-caused gastritis can usually be quite easily cured with little possibility of recurrence, but indigestion requires very careful dieting over a considerable period, and also in many cases a complete reorganization of the cat's mode of life. Here again one must stress the need for freedom and exercise.

In the early stages of gastritis it is difficult to differentiate between this complaint and infectious enteritis. Within a few hours, however, the position will be clear. In the case of gastritis there will be some slight signs of improvement, but the reverse will be the case with infectious enteritis.

Genetics

Genetics is the science of breeding, and is now sufficiently far advanced to be of considerable help to the breeder.

There are two main ways in which a breeder can work, and he will decide for himself which of these methods he prefers. He may do his breeding almost entirely by instinct, that is, by making use of a natural ability which is often called " stock sense ". He may, on the other hand, prefer to study the science of breeding. Both will produce dividends, but if the breeder will only accept the scientist as his guide, he will probably achieve satisfactory results much more quickly.

To be a geneticist requires long years of training with much practical experience, but the work of the scientist is now available for all who care to study it. Much of the theory behind the conclusions reached by geneticists is extremely complicated, but certain basic principles can be understood by any intelligent breeder. There are a number of books on the market which are written for the layman and in which technical terms are reduced to a minimum. A list of such books is given in the bibliography at the end of this volume.

Perhaps one word of warning should be given. When genetics shows that in a particular mating we can expect certain results, there is no certainty that a litter of four kittens will prove this expectation. For instance, as has been mentioned in the case of a Blue male crossed with a Chinchilla female, all the kittens will have orange eyes, but when one of these kittens is mated to a pure Chinchilla, half the kittens from this mating should have orange eyes and the other half should all be green-eyed. In practice this equality will only be found when one is considering a large number of kittens produced from this and similar matings.

Comparatively little genetical research has been carried out with cats as far as published records show, and the small amount of material available has been incorporated in the various sections dealing with breeding in this volume.

Gestation

The period of gestation is the name given to the time during which the kitten embryos are carried in the uterus from conception to the time of birth. This period for cats should extend over sixty-three days, but comparatively few cats produce their kittens on this day. It is, however, quite common for the litter to appear on the sixty-fifth day. Whether this lateness is due to the accumulated effects of abnormal conditions of life over a number of generations or not cannot be stated as a definite fact, but it is most remarkable that the ordinary house cat who is allowed to lead a perfectly normal life usually has her kittens within a few hours of completing the sixty-third day.

If the kittens are born before the end of the sixty-first day they rarely live. Early delivery is so unusual, except as the result of accident, that it needs no further comment.

On the other hand, difficulty is frequently caused from the fact that a queen does not produce her litter even at the end of the sixty-fifth day although to all appearances she is perfectly fit. Quite often too it is queens who are invariably late who are difficult breeders in the sense that the litter is produced with some danger to the queen, and then at times only by the assistance of a vet.

Naturally the longer the kittens are in the uterus the larger they will be at the time for birth. With small-made cats this is a definite disadvantage. As a result of breeding practices covering many generations some queens are so small internally, and at the same time lacking in muscular tone, that normal birth is practically impossible.

It certainly is a point worth considering whether it would not be advisable to induce labour at the end of the sixty-fifth day, particularly if the queen is known to be a difficult breeder. This is a matter for consultation with the vet. who will probably agree that an injection of Stilboestrol at this time would be helpful. Pituitrin, which is sometimes used to induce labour, has the disadvantage of constricting the os, a fact which makes the passage of a large kitten even more difficult.

There are queens which will go as long as the sixty-eighth or sixty-ninth day. A period of gestation of such length should definitely be regarded as unnatural and undesirable, and the

vet. should be asked to consider what steps may be taken when the next litter is contemplated.

Glands

See Fatness (Obesity).

Governing Council of the Cat Fancy, The

After a somewhat hectic period of more than ten years, during which several clubs tried to turn themselves into the legislative body of the Cat Fancy, personal jealousies and petty disputes were finally put aside in 1910, and a real attempt was made to produce both unity and harmony. In this year the Governing Council of the Cat Fancy was formed, and it was decreed that this body should consist of delegates sent from all the cat clubs. The work of the Council has done much to bring about the healthy state of the Fancy today, and the strife and bickering which did so much in the past to hamper progress have now largely disappeared.

The Council issues definite rules and regulations for all shows which it is asked to recognize, and whenever matters of dispute arise in connection with such shows, it is the Governing Council which is the final court of appeal.

The Secretary to the Council accepts registrations of cats with their pedigree, and upon the payment of a small fee will provide a copy of the pedigree of any cat which has been registered. Transfer of ownership is also recorded.

As has been stated under the appropriate heading, Stud Books are issued from time to time by the Council.

The present Chairman, Mr. Cyril Yeates, in addition to his love and knowledge of cats, has brought to the deliberations of the Council a kindliness and wisdom which have helped to produce the present harmony and success of the Cat Fancy.

Grass

Grass must be regarded as essential for all cats. It cannot perhaps be regarded as an item of diet, for, although all cats eat grass when it is provided, apparently they do not digest it. More often than not, shortly after the grass has been eaten, it is again vomited by the animal. If it remains in the stomach and passes through the intestines, it is then evacuated still as grass and undigested. This statement is not put forward as the final word on the subject, for probably no one has studied the matter sufficiently carefully to be able to give a considered judgement.

One thing, however, is quite certain. It is that grass eating is instinctive to cats. It may be necessary to keep an animal in the house for an extended period, and during that time no grass may be provided, yet as soon as the animal is again allowed freedom, it will seek the first available clump of grass and eat.

Careful observation will show that it is not just any grass, but a particular type which is really appreciated, for although apparently any grass is better than none, it is the coarse, wide-leafed variety which is selected if it is available. It may be that this is used as roughage, and if not successful in clearing the gullet and stomach, forms a binding mass in the intestines which cleans the lining membranes in its passage. Certainly it is a wise plan always to provide grass.

If the animal has free access to a garden, it will be able to find all it wants. For town dwellers, and particularly those who live in flats, the problem is not quite so simple, for grass must then be grown.

The best variety of seed to purchase is cocksfoot, for this is easily first favourite with cats. It is inexpensive and can be obtained from any seedsman. If planted in a pot or small box it will germinate in a few days, and will be ready for use in about three weeks. A few pots planted at weekly intervals will produce an adequate supply the whole year round. Grass will grow even in winter if the pots are kept in a warm living-room in a position where they receive plenty of light.

Gravel

See Bladder Troubles.

Grooming

For all cats daily grooming must form part of the usual routine, and its regularity will make the task easier both for the owner and the cat. Few cats appreciate the use of brush and comb when they first experience it, but most of them will learn to tolerate it with good temper, while a few will actually appreciate the daily toilet. On the other hand, there will always be a few cats whose daily grooming produces ill temper.

Sections have already been written on the use of the brush and comb, but what has been said in those parts of the book may be repeated here, where grooming includes much more than has already been described.

The coat is obviously important, but ears and eyes, and even feet should receive attention almost daily, although this



GROOMING

inspection and treatment may not demand the expenditure of more than a moment or two of time.

There are some cats which collect quantities of dirt in the corners of their eyes, and this, if not removed regularly, may produce infection of the lachrymal duct leading from the eye into the nose. This will be followed by running eyes because the duct has become blocked. A small piece of cotton wool moistened with water will effectively clean the eyes. As a matter of precaution each piece of cotton wool should be used for one eye only. This is a hygienic habit well worth acquiring, for

at some time there may be infection in one eye which might easily be transferred to the other if the same piece of wool were used.

Quite apart from the prevention and cure of canker, the ears should also be inspected, and if the flap is at all dirty on the inside, it can be wiped out with a piece of moistened cotton wool. These details may seem trivial, but if they become part of the daily routine many major troubles may be avoided at some future date.

Before brushing and combing the coat, one should feel for matted hair in the fur, for these cots must be disentangled separately. A coat may be quite free from matted patches one day, but on the next will need attention. So much depends upon the freedom which the cat enjoys. A small mass of matted hair is quite simple to disentangle, but if left for a few days requires considerable time and patience. Always feel just behind the forearms and along the underside of the body, for it is here that trouble is most likely to be found. Down the inside of the back legs is also a common place to find matted fur, and one must not forget the hair just behind the ears.

When this daily toilet is being performed a quick glance should be given to the claws and also the fur which grows between the toes. The back feet are most important, for it is with these that the animal does its scratching. A split claw can tear out a lot of fur in the course of a day, and it occasionally happens that a piece of skin is sometimes removed as well. A raw patch produced in this way on the head, and this is the usual place, often takes a long time to heal merely because the animal will not leave it alone. Matted hair between the toes can also be dangerous because it becomes so hard that it may easily scratch the face or eyes.

When grooming the coat it is a good plan to brush first, then comb, and after this double process to rub in some powder. The final stage is a brushing which will remove most of the powder and leave the coat in a fresh and clean condition.

When dealing with short-haired cats one should always finish with hand massage. The friction thus provided stimulates the skin, and leaves the coat with that bright gloss which is so characteristic of short-haired cats which are in really first-class condition.

Gums

See Teething and Tartar.

H

Hæmorrhage

Bleeding may occur for a number of reasons and need not be of any serious consequence. It is entirely a matter of the type of bleeding and the amount of blood that can be lost without danger. Usually one can say that the cat has one ounce of blood for each pound of body weight, and of this quantity one-quarter can be lost without danger to the animal's life. If, however, a third of the blood is lost there is usually a state of general collapse and recovery is most unlikely.

Capillary bleeding usually follows surface damage and can be easily controlled. In this case the flow of blood is so slow that a natural clot is quickly formed. Bathing with either hot or very cold water is helpful, and after this the wound should be covered with an absorbent pad and then bandaged tightly. Care must be taken to see that the bandage is not so tight that it stops the circulation.

Venous bleeding may follow a cut in the surface of the body. The cut need not be deep as veins are often near the surface. The blood flows steadily and is characterized by its dark colour. Such bleeding may be serious and must be stopped quickly. As there is little pressure behind the flow of blood the raising of the part so that the blood has to flow uphill usually checks the bleeding sufficiently to allow clotting to take place. When the wound is later bound great care must be exercised to see that the clot is not broken and the hæmorrhage started again. It is not uncommon to have venous bleeding from a wound in the leg, and in this case the flow of blood can usually be controlled quite easily by firmly grasping the leg in one hand. This pressure must be applied to that part of the leg which is further from the heart than the wound.

Arterial bleeding is much more alarming because it is much more rapid. The blood issues from the wound in spurts which correspond to the beating of the heart. Arterial blood, which is full of oxygen by reason of its recent passage through the lungs, is bright red. As the loss of blood is very rapid when an artery has been cut it is essential that the bleeding shall be stopped

with the utmost speed. Whereas in human beings there are many pressure points which can be used to arrest bleeding, in the cat there are very few, and these are not easy for the novice to find. Thus probably the only safe measure to employ is to apply direct pressure to the wound itself. The wound should be plugged with a suitable antiseptic pad, and then, by the use of the fingers, sufficient pressure must be exerted to stop the flow. Even in cases of arterial bleeding clotting usually takes place quite quickly when pressure is applied, for the elastic walls of the artery itself tend to close over the opening to decrease its size. This reduction in size of the opening into the artery assists natural clotting.

There are also various forms of internal hæmorrhage which also belong to the three main types already mentioned. There may be slight bleeding from the mouth or throat due to the effect of some rough object lodged there or swallowed. For this there is nothing to be done, as the bleeding is trivial and soon ceases. On the other hand, the cat may vomit blood which has collected in the stomach as the result of accident, or very occasionally a frothy, blood-stained mucus may be coughed up from the lungs. Whatever the cause and however unlikely the diagnosis, internal hæmorrhage, if of any extent or if occurring on more than one occasion, must be left to the vet. He may be able to do something, but the ordinary breeder has neither the knowledge to find a cause nor the necessary skill to apply treatment without the advice of the experienced practitioner.

When bleeding has been profuse exhaustion usually compels the patient to rest, but if this is not the case as little movement as possible should be permitted. It is always a good plan to keep the cat in a basket or box until the vet. arrives.

Care may have to be taken for several weeks as the replacement of blood lost is not rapid, and in some cases as much as a month may pass before the animal can be considered as perfectly fit.

Hair Ball

Very careful attention should be paid to the grooming of long-haired cats at all times, but particularly when they are moulting. It is the nature of most cats to spend a good deal of time each day grooming themselves with their tongues, and anyone who has been licked by a cat can realize that this organ is quite capable of picking up any loose hairs. Even when a long-haired cat is not moulting there are always a number of loose hairs which may be collected in this way and then swallowed.

When the animal has free access to grass it is quite common to find that a ball of fur of considerable size is vomited together with the grass, but unfortunately all cats are not able to dispose of the hair in this way. Not infrequently this hair passes through the stomach into the intestines where it becomes lodged, and as further quantities of fur follow, a hair ball develops. At times a ball of now tightly matted hair becomes so large that the abdomen is distended and this solid internal mass can be easily felt with the fingers. Such a condition may be serious, and if not given immediate attention might have disastrous consequences. This large, impacted mass of hair can produce a definite intestinal stoppage. Large quantities of liquid paraffin will have to be administered by the mouth, and enemas of the same oil may also be required to move the hair ball. This most distressing condition can be almost entirely avoided if, in addition to daily grooming, the cat is given a teaspoonful of liquid paraffin once each week. The doses may be increased to two each week during the moulting periods. Inspection will show that considerable quantities of hair are passed out in the motion from time to time. If this happens regularly it will naturally prevent the formation of a hair ball.

Halibut Liver Oil

See Cod Liver Oil.

Hampers

See Baskets.

Hand Feeding of Kittens

It sometimes happens that a queen has no milk with which to feed her kittens, or it may be that she is too ill to be allowed to rear a family. When faced with this situation the breeder has a very difficult decision to make, for although it is quite possible to rear kittens from birth by hand feeding, it is a task requiring the utmost patience and perseverance. Young kittens require feeding every two hours for the first few days, and this must be continued both day and night, for if the interval is considerably increased they become so hungry that they take more than their small stomachs can manage. This usually means that the kitten is sick almost immediately and the meal is lost. After the first week, however, one feed between eleven at night and seven in the morning can be tried. Certainly before attempting to rear kittens by hand one should count the cost in time and effort very carefully, for once the attempt

has been made it is only right that it should be continued, otherwise it is better to destroy the family as soon as it is obvious that the mother cannot deal with it herself.

One also comes across instances where the mother feeds her family satisfactorily for the first fortnight and then her milk supply fails. This situation is much more easily dealt with, for the kittens can be easily trained to obtain their milk by artificial means. At a fortnight they can take larger meals, and this means that the interval between them is considerably longer. One can judge of the adequacy of the feeding and learn the correct interval from the kittens themselves, for at a fortnight they are quite capable of voicing their need for food.

It is sometimes difficult to find the food that is suitable as no milk, whether natural or manufactured, is quite the same as the female cat produces herself. Cow's milk is rarely a suitable substitute, but goat's milk seems to be appreciated, and most young kittens flourish on it when they are being normally weaned. If goat's milk cannot be obtained, and for most breeders there seems to be no easy supply, one must turn to one of the prepared milk foods. There is a proprietary brand of manufactured milk for animals—Lactol prepared by Messrs. Sherley & Co.—which has been proved to be most satisfactory for both cats and dogs. Failing this the only solution is one of the foods prepared for human babies. To find one which is entirely satisfactory experiment is necessary.

Having dealt thus far with considerations which are almost entirely theory, one must attempt to give some practical help.

The food given must be warmed to a temperature of about 100° F., which for all practical purposes means blood heat. If one does not produce the right temperature there is little chance of rearing the litter. Only a small quantity of the milk should be prepared for each meal, and what is not used must be thrown away. Milk which is heated up and allowed to cool soon becomes dangerous.

If possible obtain a spoon with a small rubber teat on the end, for the task is much easier if the kitten can be persuaded to suck. Sucking is an instinctive action, and a little patience will usually produce co-operation on the part of the kitten. Before starting to feed the kittens the lips should be just moistened with the milk, for if the taste is appreciated the small animal will try to obtain more. A drop of milk squeezed on to the tip of the rubber teat, and then placed in the kitten's mouth may be the only training necessary. Messrs. Sherley & Co. also produce a spoon of this type which should be obtained if

possible. A dropper made of stout glass can be used if nothing better is available, but the disadvantage is that in this case the kitten does not suck, as the milk has to be poured into its mouth drop by drop. When one feeds in this way it is difficult to judge when sufficient has been given, while with the teat one can see when the kitten has taken as much as it wants. It will then cease to suck.

Scrupulous cleanliness is essential, for if baby kittens being fed artificially suffer from a digestive upset failure is almost certain.

As well as feeding there is also a need to see that the toilet which the mother normally performs with her tongue is seen to by the attendant, otherwise the kittens will get into a most unpleasant condition.

Never attempt hand feeding unless you feel that you must do so, and finally one must remember that not only will artificial food be necessary but artificial heat is equally essential.

Handling

Considerable care must be exercised when handling cats, particularly if one is dealing with a strange cat. In fact, unless one is wearing stout leather gloves it is never wise to touch a cat that is not known to be perfectly safe.

An injured cat is always frightened, and if one attempts to handle it, the terrified animal may strike violently with its claws, not out of spitefulness but merely because it is again being hurt or fears that it may be. When, therefore, one is compelled to help a stray cat full precautions should be taken against injury. Some cats become really violent when an attempt is made to move them, but it is obviously impossible to leave them lying on the ground if there has been an accident. It sometimes makes the task of moving much easier if they are first carefully wrapped in a coat or small blanket. These remarks have been made with reference to cats that one does not know, but even those that are daily accustomed to the handler are often not easy to manage if they are in pain.

When a cat is known to be dangerous it should always be grasped when it has its back to the handler. The loose skin at the scruff of the neck provides a good hold, and when the cat is gripped in this way one has a good deal of control. Cats, however, should not be picked up by the scruff of the neck, but the weight of the body must also be supported. If one grips the thighs firmly with the other hand, there is little danger of being badly scratched.

A placid animal may always be picked up quite easily by placing one hand on the chest behind the forelegs, and the other under the hindquarters. By using this method one achieves good balance and the animal feels secure. When the cat feels that it is likely to fall, it will struggle in an attempt to reach a position of security. Quite often this position is with the front feet firmly fixed in a shoulder. Whether this is comfortable for the handler depends largely upon what he or she happens to be wearing at the time. Carrying a cat in this way is, however, not very safe, for any fright may cause a struggle to get to the ground, and face and neck may suffer in the process.

If there is the possibility of noise or disturbance a cat should always be carried tucked comfortably under an arm. If the animal struggles and gets away, the distance to the floor is not great, and little harm will be done even to a kitten. Usually a cat will recognize this underarm position as being one of complete security.

Confidence on the part of the handler is more than half the battle, and cats always seem to sense the clumsy efforts of the timid handler.

There are some cats which have a strong objection to being handled at any time beyond a friendly stroking of the back. Such cats are always most difficult when an attempt is made to pick them up. There is little that one can do about it, for usually it is a sign of bad management at some time in the past. With patience such a cat will gain confidence, but the task is not easy. If the cause is merely spitefulness, as is sometimes the case, there is nothing that one can do.

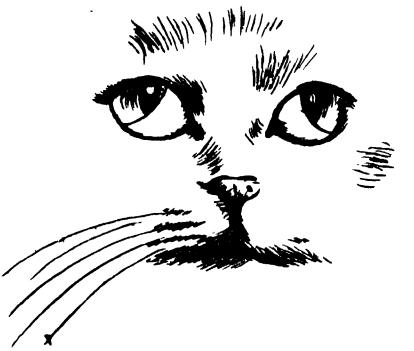
Particularly during the breeding season some males are notoriously difficult to handle even by their owners. This is often due to the fact that the animal's temperament has been spoiled either by an insufficiency of queens or because it is always housed too near females that it cannot reach. The cause is again bad management. In this case it can be remedied with the help of common sense.

Haw, The

The haw is the third eyelid of the cat, which normally is not very much in evidence. Apparently its purpose is to sweep over the ball of the eye from time to time to brush away dust or any other small objects which have collected on the surface of the eye. So quick is its motion across and back again to its normal position that very close observation is necessary if it is to be seen.

When the haw partially unfolds and is not withdrawn to its central position again, this is usually a sign that something is wrong with the animal's health. Quite often this happens when the cat is suffering from some serious and specific disease ; at other times, however, the animal may seem reasonably fit, and yet the haw partially covers the eye either for long periods during the day, or perhaps even continuously.

If only one eye is affected the probable explanation is that this membrane has been damaged in some way, but if one sees that both eyes are in the same condition, this fact must be taken as a warning.



THE HAW

Under such circumstances the assumption should be that the cat is in a run-down condition and needs building up. A nourishing diet, with an iron tonic such as Parrish's Chemical Food, should produce results in a few days. If this improvement does not follow upon the treatment, the vet. should be consulted, for he may be able to diagnose some approaching trouble which to the lay eye has not yet displayed its symptoms.

Very occasionally the haw will be damaged in a fight with the result that it loses its power of movement and remains stretched across the eye. The only cure for this trouble is a minor surgical operation to remove the membrane.

Health, Signs of

See Condition.

Heredity

If a male cat is well grown and of excellent type, and at the same time possesses all those qualities of colour and form which make a champion on the show bench, there is usually a big demand for his services. Despite the fact that time after time it has been proved that champions do not necessarily produce champions, many people are still prepared to take animals at their face value for breeding purposes. That at best is a very

slow method of bringing about improvements, because it pays no attention to the several factors which make an animal what it is at any particular stage of its development.

There are two definite factors which govern the development of all animals. The first is inherited characters, and the second comprises all those varied conditions which we call environment. Both have to be considered if one is to make any real progress in the art of breeding

As here the main emphasis is to be laid on those possibilities which a child inherits from its parents, the wide subject of environment must be dismissed in a few words.

The term environment has a very wide application, as it must cover all those influences which play upon a newly-born creature from the day of its birth until it reaches maturity, and then in a lesser degree until the day of its death. Housing, food, exercise, temperature, all play their part in shaping the individual, and consequently all must be considered by the breeder who wishes to make the best of the natural inheritance of the animals he is breeding. To take a single example, one may mention the part played by nutrition in the early months of a kitten's life. If feeding is poor in quality and insufficient in quantity for the first six months of a kitten's life, there is little chance that in maturity it will attain to that development of bone which would have been possible had the environmental factor of food received adequate attention. Many other factors could be similarly stressed to show how inherited possibilities can be made or marred by management.

Heredity, however, is concerned with the possibilities that are born in the animal, and one is here dealing with certain chemical substances which cannot be changed when once the individual has been conceived.

The living body is made up of cells, and in its simplest form the embryo develops from a male cell (sperm) produced by the father which fertilizes a female cell developed by the mother and called an ovum.

Each cell in the individual consists of two main parts, a nucleus, and around this what is called the cytoplasm. The single cell frequently doubles itself by division, and thus one cell soon becomes two, and the two four, and so on. After a short space of time each separate cell elongates until it assumes the shape of a dumb-bell with a narrow hand-grip, and this change of shape is assumed both by the cytoplasm and also by the nucleus. Finally the cell splits at its narrowest part, and cytoplasm and nucleus are equally divided. Each chromosome

also splits in two so that the new cell still contains the same number. This division continues throughout the process of growth and repair.

It is the nucleus which is of the greatest interest to the breeder. This nucleus contains a number of substances called genes which decide the type of the animal. Genes are joined together something like beads on a string, and one complete string is known as a chromosome. There will be a number of chromosomes in each nucleus. Furthermore, the chromosomes lie together in pairs which, although they may look alike, may not be exactly similar in regard to the power they possess of influencing the offspring of the parent.

For instance, a pure-bred Blue cat with orange eyes, when mated to another similarly pure-bred Blue, will produce kittens which develop orange eyes. If, however, a pure-breeding orange-eyed cat were mated to one with blue eyes, some of the chromosomes of the offspring would possess genes capable of producing orange eyes, and others blue eyes. The actual appearance of the eye of the kitten might still be orange, but that would merely mean that orange was a colour dominant to blue. One could, however, prove that the blue-controlling factors were actually in the chromosomes by mating brother and sister together, when the normal expectation would be that if there were four kittens in the litter three would have orange eyes but one would have blue. One might add here for those who would wish to read further into the subject of genetics that the three orange-eyed kittens would not be pure breeding for orange eyes ; in fact only one of them would be pure breeding.

It is this question of pure breeding that is so important. For an animal to be pure breeding for any particular quality it must receive the gene which produces that quality from both parents. One of the chromosome pairs in the first cell of the new creature will come from the father, and the other from the mother. Thus, to be pure breeding for a particular gene there must be a double dose in the individual.

When the gametes or reproductive cells are formed, the pairs of chromosomes separate so that each gamete contains half the number of chromosomes possessed by any ordinary cell in the body. When this cell unites with the female cell the chromosomes are again restored to their normal number. If this division did not take place it would be obvious that the chromosomes would be doubled in each succeeding generation.

Now, if the male received a double dose of the orange-eye-producing factors, each of the gametes will receive this factor.

If, however, the factors were only received from one parent, then only half the gametes can possess them. An animal which has received a double dose is said to be homozygous for this quality, which means that it is pure breeding in this respect. If only one dose is received it is heterozygous and can pass the quality on to no more than half its children.

Obviously the value of a sire for the particular qualities which one wishes him to pass on to his children depends on whether he is a homozygote for them. If he is not, then his value with regard to these particular qualities is much diminished.

To deal with the subject of heredity in all its aspects is the work of the scientist, but this short account of the problem will perhaps persuade the reader to go direct to the work of those scientists who have been the source of the information given here. Their names and their books will be found in the bibliography at the end of the book.

Hernia

Although it is possible for a cat to develop a hernia, it is most unlikely that one will ever be encountered except in a very small kitten.

When the queen at birth does not sever the umbilical cord from the placenta, this operation has to be performed by the owner. As has been explained in the section dealing with the birth of the litter, great care must be taken when severing this cord so that no strain is exerted on the kitten's abdomen where the cord enters the body. If this severing is done carelessly an umbilical hernia is a definite possibility. It is most unlikely that a kitten damaged in this way would survive, as there is also a strong possibility that the intestine would also be damaged. The kitten would then die in a few days. Such accidents are obviously rare, and the death of such damaged kittens makes it most unlikely that an umbilical hernia will ever be found in an adult cat.

Occasionally a swelling may be found in the groin as a result of damage to muscular tissue. Such damage is usually the result of an accident. The intestine then protrudes through the split in the tissue and a soft swelling is found. If the cat is placed on its back with legs in the air the swelling will disappear as the intestine falls back into its normal position. This rare misfortune must be regarded as serious, for there is always danger of strangulation of the intestine. There is only one possibility of cure and that is surgical treatment.

Generally speaking, however, the muscular tissue of the cat

is so resilient and strong that a very heavy blow would be necessary to produce a rupture of such tissue. It is for this reason that a hernia in a cat is of very rare occurrence.

Homeopathic Treatment

The idea behind homeopathic treatment is that medicine is to be provided in small quantities which would in a normal animal produce the symptoms of a mild attack of the disease which one is trying to cure in the invalid. It is almost a case of " curing with a hair of the dog that bit you ". There are possibly many breeders who have a considerable knowledge of homeopathic methods and treatments, and for them it is simple to experiment with their animals. There may be veterinary surgeons who prescribe on these lines, but probably for the ordinary breeder it is wise to adhere to more conventional methods ; although if anyone is prepared to make a study of the subject, there are definitely prospects of successful treatment. A little knowledge, however, must be regarded as useless, but, as in all homeopathic treatment the doses are very small, there is little danger of doing harm even if cure cannot be expected. Many readable books and articles have been written on this subject, and breeders would find them of considerable interest even if they were not prepared to adopt the methods suggested.

Horse Meat

See Meat.

House Training

All kittens should be house trained before they are sold, as habits of cleanliness are easily acquired before a kitten is two months old. If, however, the breeder allows the kitten to be dirty in the house during the early weeks of its life, it is much more difficult later to eradicate this bad habit.

There are some breeders who allow their houses to become most insanitary merely because they have more cats and kittens than they can manage in the spare time available. When cats are kept in a dwelling house conduct which is unpleasant should not be allowed, and careful observation must detect any offender, who should then be taught to use the sanitary tray. A grown cat that is not house trained reflects discredit on its owner rather than on itself.

Once the use of the tray has been taught in the house it is an excellent plan to encourage the kitten to go outdoors. When cats are allowed adequate freedom, use of the indoor tray will



A WELL-TRAINED FAMILY

only be made in an emergency. Many cats never need a tray in the house at all when the days of their early kittenhood are past. Obviously breeding animals cannot at all times be allowed such freedom, but when it is necessary to keep them under control they will know what to do and will not disgrace themselves. (*See Sanitary Tray.*)

Hunger

Cats usually show hunger much more obviously than human beings, not because they are less refined, but merely because they do not eat unless they feel the need for food. A generalization of this sort, however, requires some qualification, as there are some cats which are just greedy by nature. Siamese are notorious for the size of their appetites, and also from the fact that it is very difficult to satisfy them. Before condemning Siamese for gluttony, one must remember that the more active the animal the greater is its need for food. No domestic member of the cat family is more active than the Siamese.

A hungry cat has a keen appetite unless it is ill, and will call for its food if it does not arrive when the need is felt. If an animal does not show hunger it is a good plan to miss the meal, for the fact that the food is not eagerly awaited may be a sign of overfeeding, or at least that the digestive system is ready for a short rest. There is never any need for anxiety because a cat with normally a good appetite seems disinclined to eat. As has already been said, cats are usually very wise in the matter of feeding.

Abnormal hunger is usually a sign that there is something wrong, and the condition needs careful consideration to find the cause.

A cat which has been very ill usually displays exceptional hunger soon after convalescence begins, and this is a state which can quite easily be explained. During illness the flesh, and particularly the body fat, disappear at an alarming rate, and consequently the body calls for a renewal of those tissues which have been broken down. The sight and desire for food speed up the digestive processes, and yet the nourishment which can be taken at one time provides only a small margin over the normal demands of the body for heat and energy. Thus the cat becomes ravenous, especially when the wisdom of the owner dictates that meals for the convalescent shall be smaller in size than for a fit cat. This abnormal hunger may last for several weeks, but the wisdom of the breeder must, throughout the time, override the natural desire of the animal.

A cat suffering from worms will frequently show an excessive hunger due to the fact that much of the nutritive value of the food supplied provides for the needs of the worms and not the cat. One should always suspect worms when hunger is so great that normal meals will not satisfy the animal. A cat with worms will sometimes show a depraved appetite as well as an excessive hunger, although normally cats are most fastidious eaters. If there are no worms present a depraved appetite may be a sign of some deficiency in diet. A diet which is unbalanced will often produce this form of depravity, and it is always wise in such cases to consider very carefully the merits of the diet from the point of view of balance. Careful thought may show that the diet is deficient in certain essentials. Once the fact has been realized, remedy is simple.

As one would naturally expect, a queen heavily in kitten frequently displays great hunger. She has not only to supply the needs of her own body with the food she eats, but a considerable portion of her daily intake of food is needed for the development of her kittens. Hunger in this case must be satisfied, but this should be done by increasing the number of the meals rather than their size. Distention of the stomach is not advisable when a queen is heavy with kittens. The fact that her uterus is distended may mean that she can only retain comparatively small meals in the stomach.

Hysteria

See Fits.

I

Impotence

Impotence is a term used with reference to a male cat which, for some reason or other, is unable to sire kittens.

Occasionally one finds a male who seems to possess no sexual desire although he is well beyond the age when a normal cat would be expected to sire litters. When this unusual trait appears it is necessary to have the animal examined by the vet. Possibly it will be found that the testicles have not descended, and as a consequence of this there has not been normal sexual development. There is little that can be done in such cases, as probably operative treatment would not be considered as worth while. A course of Vitamin E, as suggested under Sterility, and Wheat Germ Oil, may produce the desired effect, but one should always consider very carefully the advisability of using for breeding purposes a male abnormal in this respect. It must be frankly admitted, however, that there is no conclusive evidence to prove that such defects are in any way hereditary.

Any form of inflammation in the reproductive glands—orchitis may be quoted as an example—may render a male impotent either because the spermatozoa which are ejaculated are deformed, or too few are sufficiently mobile to produce fertilization. When the trouble is functional, however, there are usually other signs which would enable the vet. to diagnose the case accurately with the definite possibility of being able to cure it. With a male who has sired kittens satisfactorily, and then is unable to do so, the trouble is much more likely to be functional rather than organic. Overuse of a male may produce this result, and consequently males should always be used with the utmost discretion, particularly when they are getting on in years. It is an accepted fact that reproductive capacity decreases with age.

Some young males may create an impression of impotence when such is actually not the case. This sometimes happens with young studs which are highly nervous. They seem to be keen to mate the queen, and may appear to have done so successfully, and yet there is no result even when the queen is known

to be a good breeder. Such a male usually benefits from experience with a queen who has had a number of litters, for once he has gained confidence he rarely has further difficulties. If he is tried with a flighty or spiteful queen his value as a stud may be impaired for many months, if not permanently.

Finally, of course, there are occasional males who, by reason of some congenital defect, must always be impotent. There is little that one can do about them except to obtain confirmation by veterinary examination of their uselessness as studs.

Inbreeding

Inbreeding means the mating together of close relatives, and the closer the relationship between the pairs, the greater is the degree of inbreeding.

The main interest of the cat breeder is to know how far he may safely practise inbreeding in his attempts to produce animals of the highest quality for the show bench. The problem is by no means simple, for the dangers of close inbreeding are many, and considerable skill is required if any advantages at all are to be obtained from this practice.

If the reader has not already done so, the section on Heredity should be read before this section is considered.

The idea behind inbreeding is quite simple. We have an outstanding sire whose qualities we wish to fix in our strain, and consequently his best daughter is mated back to him. This should concentrate in the offspring his good qualities, provided, of course, that he is homozygous for such qualities. If he is a heterozygote, then we shall have achieved little.

There is also another side to the picture, for no animal is compounded of good qualities only, and in the same way that we are fixing good qualities undesirable qualities are also being established. Thus where inbreeding is practised for a number of generations, there must be a very considerable wastage, and in the case of cats only a small proportion of kittens born may be outstanding, while the majority are mediocre and a few are definitely undesirable. This means that from each litter several kittens may have to be destroyed. This is not a practice at all pleasant to the ordinary breeder.

To achieve any real success with this method of breeding, the original pair would have to be of outstanding merit. Mediocre animals are likely to cause waste of time, for if their inheritance does not contain the qualities we are seeking, no amount of inbreeding will ever produce them.

Generally speaking cats do not take kindly to inbreeding,

and in an effort to fix certain qualities others equally important may be lost.

Some strains today show definite signs of the ill effects of this method, although the inbreeding shown in the pedigree may not have been very intense. Such strains often produce bad breeders, and it has long been a recognized fact that fertility is lowered the longer inbreeding is continued.

Thus for the cat breeder it is not a method to be recommended, and improvement must be sought in other ways. The safest method, and the one most likely to bring success, is the search for the prepotent sire. Such studs always exist in small number, and are not to be judged from their pedigrees but from their progeny. The stud who produces in his kittens his own outstanding qualities, whatever female he has had as mate, is the one who will produce better results than any system of inbreeding.

Incontinence

See Bladder Troubles.

Indigestion

Indigestion, although rare with cats which are allowed complete freedom, is, however, comparatively common when the animals are compelled to remain permanently in restricted quarters. Some breeders seem quite oblivious to the power of exercise to aid digestion. In course of time a cat confined within narrow limits loses its desire to take exercise. The appetite becomes poor, and even foods which are usually attractive seem to produce no interest. Flatulence after eating even a small quantity of food is most noticeable, and restlessness shows clearly that the animal is uncomfortable. To an inactive cat starchy foods can be slow poisons, and an internal acidity is produced which causes the animal to display an excessive thirst. The drinking of copious draughts of water does not help, however, as this merely results in the dilution of the gastric juices, and the vicious circle is complete.

Quite often a cat with indigestion will vomit its meal within a short time of having eaten it. This should certainly be regarded as a warning. One must, however, not confuse this action with what happens when a cat eats its meal far too quickly and then has it returned at once by an overloaded stomach.

Immediate remedies may be provided by the administering in capsule form of one of the many powders which are sold for human use. Any of these may provide immediate relief,

but is unlikely to effect a permanent cure. A mild aperient should be given in the form of Virolax, or something similar. The dose should be about half a teaspoonful. A fast of twenty-four hours' duration will also be helpful, but no permanent cure can be expected unless the animal is permitted to lead a natural life.

With indigestion the bowels are also irregular in their action, and it is quite common for acute constipation to be apparent for a period, only to be followed by diarrhœa. Normal bowel action must be restored and then maintained, otherwise some form of indigestion is bound to recur.

Infection

See Boarding Establishments and Stud Cat.

Infectious Enteritis

Infectious enteritis is the disease most feared by cat breeders, for when it makes its appearance in a cattery there are bound to be heavy losses, and it may take a very long time before the loss of first-class stock can again be made good. So heavy are the losses when this disease, which is highly infectious, reaches epidemic proportions, that it is not at all unusual for four out of five affected cats to die. Neither breeder nor veterinary surgeon have any real chance of seeing the results of any treatment applied, for in most cases death will occur within thirty-six hours. Attempts have been made to control this terrible scourge of the cat race, but so far no specific for the complaint has been found, and although a temporary immunity can be provided by the injection of a vaccine prepared from former victims of the disease, the length of that immunity is probably only a matter of a few weeks.

Even now it is not possible to make definite statements about the cause of the disease, for the virus is of the type which can even pass through a porcelain filter. Post-mortem examination shows that the wall of the small intestine is often much inflamed over a portion of its length, and death will occur when this inflammation extends over a distance of no more than an inch or two.

The onset of the disease is usually sudden, for the cat may appear perfectly well one morning and be dead before the next morning arrives. The first sign is usually an unexpected loss of appetite, and if the temperature is taken as soon as this symptom is displayed, it will probably be found to be 104 or even higher. As so often happens with cats with a high temperature, the animal goes in search of a cool spot, and will prefer to lie on tiles or stone or anywhere where it can feel the draught from under a badly

fitting door. Apart from this desire for coolness the cat seems to realize that its case is hopeless, and evinces no interest in life. It usually sits rather than lies, and in a few hours will appear to have become a huddled mass of bones.

There is usually violent and persistent sickness, which in a short time removes all moisture from the body, and the wastage of flesh is really amazing to a breeder experiencing this trouble for the first time. Rarely do the bowels function during the course of the illness and there is no diarrhœa.

With the constant sickness the temperature rapidly falls and quickly becomes subnormal. The cat then begins to lie down instead of crouching, and a state of coma follows. From this stage there is practically no hope of recovery.

It is most unusual for there to be any sign of lung or throat affections with infectious enteritis, but this is by no means surprising, as the course of the disease is so rapid that secondary complications have little time to appear.

This may seem a depressing picture, but it cannot be otherwise when one is compelled to stand by and watch what appears to be the inevitable progress towards death. There is, however, an opportunity for the public-spirited breeder to try remedies even if they are of no avail, provided, of course, that one can feel assured that what is done will not make the cat any more dejected and distressed.

It is perhaps unwise for the amateur to theorize on such a complicated medical subject, but any experiment would be worth while if it held even the smallest hope of success. Is it a fact that infectious enteritis even in its onset produces an appearance of profound anæmia? Does death occur so quickly because of the destruction of the red or white corpuscles or both? If such is the case can veterinary science suggest a method whereby such rapid destruction can be prevented, and fresh corpuscles produced at a rate which will give some hope of recovery? Nuclein has been used by some vets. with occasional success.

Because of the constant sickness, administration of remedies by the mouth would not be practicable, but injection could be tried. In matters of this sort there must be no false sentiment, and it is not true logic to project one's own feelings into the cat. If the chance of a cure is as low as one in a hundred, surely that chance should be taken.

When cats are to be sent to shows they should be given temporary immunity before the show season starts, and again about a month later. This is a matter for discussion with the vet., who can explain both the possibilities in this field.

When there is an outbreak of infectious enteritis in a cattery the most rigid quarantine must be observed. It would be most unwise even to visit other cat owners until some weeks after the last case. It has been said that even letters can convey the infection. Certainly it would be most unwise to receive other cats on the premises for at least three months. Some vets. would consider six months to be the period for complete safety.

The most thorough disinfection is of supreme importance, and as much equipment as possible should be burned and the rest treated with the flame of a blowlamp. Buildings should be left vacant for a full six months and then again be disinfected before use.

Much research has already been carried out on this disease and considerable progress has been made. When times are again normal it is to be hoped that the work will be continued, so that eventually infectious enteritis may be regarded as a disease that is definitely curable.

Introducing Cats

Cats are essentially dignified creatures and stand very much upon ceremony. The intricacies of feline etiquette have never been understood completely by humans, although they have at least been taught that the formal introduction of two strange cats is a matter of necessity if future relations are to be amicable.

After all, it is only sound common sense to expect that a cat which has held supreme sway in a human household should resent the arrival of a possible partner.

When two cats start off by being bad friends it takes a very long time before they are prepared even to tolerate each other's presence, but all unpleasantness can be avoided if one deals with the matter sanely.

Cats are inquisitive by nature, and it is by the use of their noses that they gratify this weakness. They are not naturally unfriendly towards their own kind, although



BLUE POINT SIAMESE
PINCOP AZURE KYM

they may well treat with complete disdain any other cat which does not attract them.

When a new cat or kitten is introduced into a household where another cat has already been in occupation for some time, the newcomer must be introduced by gradual stages. It does not show due consideration to introduce the new animal by just planting it on the floor by the old resident.

Put the new cat in a room by itself for a time where it too can start to get used to its new surroundings. Then when you visit the first tenant you will be making the first step in the introduction, for your hands and clothes will smell of the new arrival. These strange and unaccustomed scents will attract the attention of the other cat who, without any ill feeling, will investigate them with much interest.

It is a good plan next to change the cats over so that each goes into the room which has previously been occupied by the other. In the space of a few minutes each will have learned much about the other.

Finally, they can be brought together in the same room, when the smelling process can be continued at close quarters. There may be a little swearing and spitting for a few moments, but that is probably an attempt by each to assert a moral ascendancy over the other. Rarely will there by any attempt at fighting, though both will display tensed paws in case defence is necessary. After they have been watched for a few minutes, unless the owner definitely knows that either of the cats is spiteful, they can safely be left alone. If one returns some time later, it need cause no surprise if both animals are curled up together and fast asleep.

All this may sound very trifling and unnecessary, yet there are many instances of households where cats do not get on well together and never will do so. A more careful introduction might have prevented this unfortunate state of affairs.

So few owners of cats ever stop to think of the cat's point of view, in fact, possibly they imagine that because a cat cannot talk, a " point of view " is beyond its capabilities. We have still much to learn about the mental processes of animals.

The foregoing remarks can never be applied to entire males. It is very rare for two males to be able to live together peacefully unless one of them has been neutered. Even then things may not always be peaceful. Two " complete " males will fight almost to the death, and even if, during the winter, they can be together without serious fighting, in spring and summer, the normal breeding season, one could never leave them alone together.

Inturned Eyelids

Very occasionally a cat will be found with an inturned eyelid, a condition which is usually the result of some serious illness in which the eyes and lids have been affected. In bad cases of distemper, when the eyelids have become badly inflamed, the lid sometimes seems to fold over and the two inner sides grow together. One notices in such cases a thickening of the lid, and the eyelashes will be pointing upwards or inwards. When the lashes touch the ball of the eye considerable irritation is produced which the cat increases by constant rubbing with the paw. The only cure for this rare condition is surgical, and although control of the eyelid may be partially lost, there will be no further irritation.

Eyelids have been found on which there were two rows of lashes, and one of these has swept constantly against the eye. Frequent removal of the hair will help matters, but surgical treatment provides the only permanent remedy.

Finally, several eyelashes may grow inwards and thus produce irritation. These may be removed by the vet., and the new hairs, when they grow, are quite likely to grow in the normal direction. Certainly removal of the individual hairs is the best method of treatment, and, although it is an operation which needs a steady hand, most amateurs can undertake it if care is taken to see that neither the eye nor eyelid is damaged.

Invalid Diet

See Convalescence.

Irritant Poisons

See Poisoning.

Isolation

See Quarantine.

J

Judging (*by Evelyn Langston*)

Judges are born and not made, yet even the most talented potential judge must be educated. The born judge has a natural gift for assessing good and bad features, and the ability to see the animal as a whole.

I prefer judges who are also breeders, or who, at any rate, keep themselves well acquainted with the animals at the various stages of development. For, although it is comparatively easy to judge adult cats at the top of their form, it is only the breeder-judge, or one well acquainted with the young stock, who can satisfactorily judge kittens. Judges, of course, judge to the official standard drawn up by the specialist societies and approved by the Governing Council, but every judge has a personal interpretation of that standard. Care, however, must always be taken not to allow a strong personal preference for certain points to bear too much weight in the final decision.

The experienced exhibitor soon realizes what certain judges consider to be very important points. For instance, one judge may be very impressed by the colour of eye or coat, another by the size of the cat or the type and quality of its coat, but a good judge, no matter how strong his preference for special points, never allows himself to be unduly influenced by them.

Then again, condition on the day of the show has a lot to do with the judge's decision.

Judges must also use their influence to encourage certain points in which as a whole a breed may be weak, or, on the other hand, to prevent those exaggerations which tend to appear in certain breeds.

I suppose that I am considered to be a " type " judge, and certainly I am always most eager to show under judges who make type—which is really a name for outline and shape—a very important feature. Most breed clubs allot the greatest number of points for type. In certain varieties, however, colour is of great importance, as is the case with Tabbies and Chinchillas, but even with these breeds encouragement should be given to good outline.

The reason why I rate type so high is a simple and obvious one. Type is present all the year round and is not affected by age, whereas other points are often transient (such as eye colour in Blue Persians), or at any rate variable according to the time of year, and also according to the care and attention which has been given to the cat.



WHICH IS BEST?

All judges have their own methods for judging. Here are mine.

I go round my class and look at each exhibit in its pen, making a special sign in my judging book against the numbers of those cats which attract me at first glance. After this I judge each cat separately while I or my steward takes out from its pen every cat, no matter how poor a specimen it is. I go over each exhibit very thoroughly, feeling the bone, and take care to examine the tail carefully in case there is a kink. This is very important, and I once found that a well-known champion had a decided kink at the end of his tail. I placed him reserve in his class, and in my report mentioned the defect I had found. Later I received a most irate letter from the owner, who appeared to think that some rival had informed me of this fault. Actually I had found the

defect because it is part of my judging routine to feel each tail from root to tip.

Next I examine each exhibit in every particular point, making notes in my book and underlining any point that strikes me as outstanding, whether it is good or bad. Against individual cats which impress me I make a special mark. After this I compare the exhibits according to my markings, and make up my mind which is the best all-round cat when due allowance has been made for condition on the day. Quite often it is easy to pick the winner, but much more difficult to place the others in order of merit. When there is in any exhibit any point of outstanding merit, I make a separate note of this in case there should be a special prize for this particular quality.

When the open classes have been dealt with, the repeat classes claim attention. Cats which have been in the previous class are bracketed, and therefore are not again examined, but those which are not bracketed have now to be considered in detail. Those which have been judged in the earlier class have marked against their numbers any awards they may have received. Thus I now have to decide whether the " 1st Male " is better than the " 1st Female ", and so on, and when this decision is made I proceed to the other classes, taking care not to " cross judge " (i.e. not placing a cat judged higher under a cat that has been in a lower position). This is a comparatively simple matter if the numbers of the classes are placed in numerical order, but can become a nightmare if the arrangement is haphazard and the classes are large.

In judging kittens a good judge should pay attention to the various stages of development while still keeping the standard (which is an adult standard) in view. It is here that the breeder-judge scores.

In kittens coat colour is more often patchy in the self colours owing to the mixture of baby and adult coat. In other varieties the markings or tickings are not through, or perhaps the undercoat has not grown, making the markings too prominent. Eye colour, too, is often problematic, as in some strains the permanent colour is slow in developing. Taken all in all the judge of kittens has to be something of a prophet ; he must also judge on the appearance on the day, although certainly less so than in the case of adults.

Then there are the mixed or club classes where often the very best of all varieties meet, and then one has to decide whether a super Cream or an outstanding Blue is the better specimen of its own particular variety. When a cat wins right through its

classes under several different judges, one can truly know that this is a superb exhibit.

I think that a good judge cannot help recognizing exhibits after two or three shows, but on no account must he allow himself to be influenced by the knowledge that any particular exhibit has recently been " best in show " somewhere.

A judge must be absolutely fearless and must be prepared for criticism.

When, after judging, an exhibitor asks why her cat has not won, I always refer to my notes and read my remarks exactly as they stand.

Judges should be fully aware of their responsibilities, and realize that their opinions are bound to affect the progress of the breeds. When, for instance, a breed is poor in either quality or quantity, any improvements should be encouraged.

In conclusion I would say to all who wish to be judges—Always follow the dictates of your own conscience. Be honest, be just and above all be fearless.

K

Kaolin

This is a substance which is sometimes of the greatest use when cats or kittens are suffering from violent diarrhœa. Whatever the cause of this disturbance, it is often extremely difficult to control when it has persisted for several days. When faced with this situation one can sometimes bring about a speedy improvement by giving Kaolin. It can be administered enclosed in a capsule ; in fact, if not given in this way it is extremely difficult to persuade the animal to take a dose. Its value lies in the fact that once it has reached the intestines it combines with the noxious substances produced in the bowel by the infection which originally caused the diarrhœa. It also slows up the movement of food and juices through the bowels, allowing bile and other digestive ferments to mix with the food in its passage. In practice one often finds that Kaolin tends to constipation, and thus several hours after the Kaolin has been given a mild aperient may be needed.

Kaylene, a proprietary brand of colloidal Kaolin, has been found most satisfactory in use.

Kinked Tail

Sometimes a cat is found to have a kink in its tail, and in every breed except Siamese or other oriental cats, this is considered to be a grave fault and would disqualify such an animal on the show bench.

In some small animals such as mice short and badly-kinked tails often appear when much inbreeding has been practised, and it is quite possible that this may be the cause of the trouble when it appears in long-haired cats. It is difficult to suggest a cause for the kink in the Siamese, for it was apparently a characteristic of the breed when it was first introduced into this country towards the end of the last century.

Today opinion seems to be divided as to the desirability of the kink even in the Siamese, and the majority of kittens which are born do not possess this characteristic of many of their ancestors. It is, of course, probable that even with the Siamese the bent tip

of the tail was originally a deformity resulting from too close mating in the natural state. It is probable that in a few years the kink will disappear as a result of selective breeding.

To many breeders the most interesting aspect of this peculiarity of the Siamese are the legends which have grown up to explain it. Two of these legends are worth repeating.

It is said that Siamese cats were used in the temples to guard the sacred vessels from thieves. As the cats realized the value of sleep it was obvious that they could not carry out their duty faithfully and arouse the guardians of the temple unless the thief awakened them. For the cat this was quite simply solved by curling the tip of its tail round the base of the vessel. Being temple cats and performing a sacred duty, it was only to be expected that they would be well fed, and as a result much of their time was spent in sleep. Was it surprising, therefore, that the tip of the tail remained permanently kinked?

The other story refers to a certain Siamese princess who went down to the river to bathe with her favourite cat. Being a modest princess she naturally went into the water wearing her clothes, but thought it unwise to perform her ablutions while she still wore her valuable rings. As she could find no safe place to put them, she threaded them on the tail of her cat who, much pleased by this great honour, started to wag her tail, causing several of the rings to fall off. This alarmed the princess, and when she rethreaded the rings on the tail, she bent over the tip to keep them safe. Thus it became the fashion for Siamese cats to have a kink.

Whether you believe the stories or not does not really matter, but the fact remains that some Siamese have kinks which are not regarded as a disqualification.

Kittening

Having kittens is a perfectly normal function of female cats and should not cause any difficulty, yet it must be confessed that many pedigree females find the task fraught with troubles and dangers. The owner must, therefore, be prepared for all eventualities, although he will be wise to interfere no more than is absolutely necessary.

Preparations for the litter should be made at least ten days before it is due so that during this period the mother may get used to the quarters in which she is to give birth and rear her family.

A good, stout, cardboard box is excellent for the purpose, but it should not be less than 24 inches in width and 15 inches in depth. If the queen is expected to have a large litter, a length

of 24 inches should also be regarded as a minimum if some of the kittens are not to be overlaid. The front of this box should be only partly open, with a sill at the bottom 4 inches in depth, and a shield at the top 6 inches deep. This is assuming that the box is about 18 inches high. Cartons in which packets of cereals are delivered to the grocer are usually made of stout cardboard, and can easily be adapted for the purpose. A very successful breeder of Siamese uses round cheese boxes, but they are not every breeder's choice.

The sill at the bottom will usually prevent the kittens from climbing out until they are between three and four weeks old, which is quite soon enough for them to start crawling round the room. It will also have the advantage of preventing any floor draughts from reaching the kittens. The top shield has a dual purpose, for in addition to checking the inflow of air from above, it also helps to limit the light inside the box. The eyes of young kittens are very sensitive, and the light in the back of the box should be dim, although not actually dark, and in this way the kittens can regulate the light for themselves, gradually becoming accustomed to the greater brightness of the front of the box, and finally the ordinary light to be experienced outside their nest.

It is a great mistake to give the queen a box or drawer into which she has to jump, for she cannot always see where she is about to land, and she may jump on one of her kittens with disastrous consequences.

The box for the kittens should always be placed with its back to the main light of the room coming from the window.

When the queen is first introduced to the box it is a good plan to line it with the bedding to which she is accustomed, for she is then more likely to accept it. Some queens are very difficult in this matter, and seem to prefer a bed of their own choice even if it means the bottom of a wardrobe or the middle of a human's bed. If, however, she has no other comfortable choice in the room she will usually take to the box provided with a good grace.

When the kittens are due to arrive the best lining for the box is a number of thicknesses of folded newspaper, but it is quite useless preparing this before the arrival of the kittens is imminent, as the queen will amuse herself by tearing the paper to shreds with her claws. Newspaper is useful as bedding because it can be so easily replaced when soiled, as it will be at the time of kittening.

During the last week of pregnancy it is most important to see that the queen's bowels are functioning normally, for a queen who is constipated experiences more difficulty than one whose

bowel action has been satisfactory. It is a good plan to give a small dose of liquid paraffin each day rather than one or two large doses.

During this last week the queen should be left as quiet as possible, and she certainly must not be " fussed " in any way. She herself will show little anxiety over forthcoming events, and it is quite unnecessary for the owner to display anxiety on her behalf. Until a short time before labour starts the cat will walk about and eat her meals in a normal fashion. It is quite common for some queens to show that the family is about to arrive by refusing to eat a meal which is provided for them. When the queen goes into her box, settles down comfortably and starts to purr loudly although no one is taking any notice of her, one can be quite sure that the family is about to arrive.

It is at this stage that the owner must exercise considerable self-restraint. Some queens like their owners near at hand at this time, but the majority are more concerned with the coming family, and have no other interest. A nervous queen may like to know that her owner is near, but once having assured herself of that fact she is prepared to get on with her maternal duties.

The first pangs of labour are hardly noticeable, but if one watches from a distance one can perceive the rhythmical movement which shows that the kitten is on its way into the outside world. Labour is not continuous, but gradually increases in intensity until the kitten is born. It is impossible to state any period of time in which the kitten will be born after labour has commenced, for this is very variable. One can say, however, that the first kitten usually takes the longest time to produce, and that some of the succeeding kittens will be born in rapid succession. Certainly one need feel no undue alarm until a period of two hours has elapsed, but that should be regarded as the limit for a normal queen. Provided the queen remains in her box and shows no real sign of distress, one can assume that everything is normal. When she starts to walk round the room, and still continually tries to expel the kitten, then the time has come to seek expert advice. The birth of the whole litter may take anything from two to four hours if everything is normal.

The kitten is born in a sac which the mother will usually split with her teeth, thus freeing the small animal. Finally, the placenta, which is joined to the kitten's body by the umbilical cord, is produced, and thus the first kitten is born. A maiden queen may appear somewhat flustered at this stage and not set about this task immediately. There must be no delay or the kitten will die. It is quite a simple matter to split open the sac

by using the thumb and finger of each hand. The cord must also be separated, and this is usually done by the queen biting it off about an inch and a half from the body. If, after a few minutes, she has not done so, it is very easily dealt with by the breeder. Hold the cord firmly between the finger and thumb of the left hand, and then, by pulling with the finger and thumb of the right hand, break this cord. It is most important that the left hand should prevent any pull on the animal's body where the cord enters or a hernia may follow. If one wishes to be particularly careful the broken end may be touched with a drop of iodine.

When once she sees the kitten, the mother will usually start to lick and clean the baby, but if she does not seem prepared to undertake this task the owner must do it for her. The kitten should be well rubbed with a rough towel, and its eyes, nose and mouth freed from mucus. The mother's tongue not only cleans, but its roughness also provides an excellent friction rub which will aid the circulation and really bring the small creature to life.

Most queens now settle down to eat the placenta, and they should be encouraged to do this for it greatly assists the flow of milk, but it is not every queen who is interested. Some of them quickly start to produce the next kitten, and wait until all are born before eating any placentas.

If the queen is not at all interested in the kitten that has been born, it is a good plan to wrap it in a piece of blanket and put it in a box with a well-covered hot-water bottle. If she resents this interference, however, it is far wiser to leave the kitten with her.

When all the litter has been born the queen will settle down with them quite happily, and in a short time the whole family will be feeding to the accompaniment of the proud purring of the mother. No attempt should be made at this stage to renew the bedding, but this may be deferred until some hours later. Then, when the queen comes from the box to have a drink, the soiled newspaper may be removed and replaced by a fresh supply. On top of the paper several thicknesses of blanket should be laid, and this will make a warm bed for mother and kittens.

Few queens will move far from their family during the first twenty-four hours, and no attempt should be made to persuade them to do so. The only food to be given should be of a milky nature, and no meat should be provided for the first day. Put any food outside the box where the queen will go to it if she feels the need, but it does not matter if she shows no inclination at all to eat.

The less one interferes with young kittens the better. If all are

normal one will soon realize that all is well. The mother is quite capable of supplying all the needs of her family.

It is a great mistake to turn a litter of kittens into a public peep-show, and the wise owner will keep away all strangers for the first week to ten days. The queen will be a better mother if nothing happens to disturb her.

After about a week the kittens' eyes begin to open, and all should be open by the tenth day. At this time there should be a careful inspection to see that all eyes are opening normally, for sometimes one does find a kitten with stuck-up eyes, and these must receive attention. Apart from that, provided that the kittens are quiet and contented, nothing need be done for them, and one can confine attention to the care of the mother to see that she is well fed and comfortable.

L

Lachrymal Duct

Running from the eye into the nose is a narrow channel which is called the lachrymal or tear duct, and it is through this passage that excess liquid from the surface of the eye naturally drains itself. If the duct is closed, then the liquid will run from the corner of the eye and over the fur at the side of the nose. The cat is then said to have a running eye. Some cats are always in this state with one and sometimes both eyes running.

It is quite easy to understand that when there is inflammation in this duct, the membranes become thickened and the narrow passage is closed. In cases of chill, or when the eye itself is inflamed, the trouble may spread to the duct, which will then become temporarily blocked. When the cause is removed, the duct, after a short period, will again function normally.

Unfortunately, however, one sometimes finds a case where the condition has become chronic and the duct is permanently blocked.

A running eye due to permanent stoppage of the channel may appear as a complication resulting from influenza, and apparently there is in such cases little that can be done to cure this condition.

It is also possible that the craze for excessively flat faces in some varieties has produced deformity in the shape of the duct, which from this fact cannot allow free passage of water from the eye into the nose. Exaggerated types usually produce some unfortunate results, and this is but one example of that fact.

Lacteal Tumour

A tumour in and around one or more of the milk glands of a cat is not common, yet so many cases are reported from time to time that notice must be taken of this unsightly affliction. Such swellings, which are usually quite hard, rarely cause pain, and unless growth is rapid, treatment need not be attempted. In fact, the only treatment possible is surgical. When, as occasionally happens, such growths become painful, a surgical operation for their removal is definitely indicated.

It is difficult to attribute a cause for such growths, as it is probable that a number of influences may be contributory factors. It must, however, be stressed that when for any reason a cat loses her kittens while she is still producing a considerable quantity of milk, steps must be taken to draw off this milk. The diet of the queen must also be such that the supply of milk from the glands is rapidly diminished. Kittens feed from the queen at frequent intervals, and thus milk is supplied to meet a definite need.

If the milk is not taken away, the natural tendency is for the animal to produce less. Thus, although it may sometimes be necessary to use an extractor cup to draw off the milk, this must be done with great caution and under expert advice. If all the milk is taken away, the queen will produce a further supply until the secretion of milk is diminished by the changes which have been made in diet. Thus, the use of this extractor cup must be to provide temporary relief only, and it should never be used until such relief is essential. If this operation is carried out skilfully in combination with other measures, all danger of future trouble should have passed in three or four days. Rubbing the glands with camphorated oil, as in cases of definite inflammation, is also helpful. As has already been implied, the diet should be reduced very considerably, and all feeding should be as dry as possible.

A lacteal tumour is something entirely different from another type of swelling with considerable inflammation which sometimes occurs in the milk gland. This condition is somewhat similar to mastitis in cows. In this case the skin will be red and shining with a definite feeling of heat. The cat will also quite probably have a temperature and show general signs of unfitness. When this happens it is often only one gland that is affected. The kittens should not be taken away, but the queen should be bandaged so that the nipple connected with this gland is not sucked. Hot fomentations when possible, and rubbing with camphorated oil, will soon produce relief. In this case milk should certainly not be withdrawn, as the sooner the gland ceases to function the more rapidly will the inflammation subside. It is rare for the trouble to appear again with a subsequent litter as the cause in most cases would appear to be infection through an accidental scratch or cut.

Leg Weakness

Young kittens sometimes display marked weakness in their legs, and usually it is the back legs that are most frequently affected. Although it is by no means impossible for a kitten to strain a leg

when jumping, particularly as they seem not to mind the height, it is nevertheless unusual for it to injure itself in this way. A kitten soon learns, and rarely makes the same mistake twice if the experience is painful. Thus, when a kitten gives evidence of a strained leg on a number of occasions, it is more than probable that there is an underlying physical cause which needs attention. Rickets is the likely solution. (*See Rickets.*)

Lice

Although lice are much more difficult to eradicate than fleas, they are fortunately considerably rarer in their appearance.

There are various types of lice, but it is only one variety which becomes the guest of the cat, and happily this is not of the blood-sucking species. Smaller than a pin's head, and yellowish-grey in colour, these insects usually are to be found only on animals whose coats have been neglected. It is said that they will not live on a fit cat, but it is doubtful whether this statement is one of fact. A cat whose coat is dirty and matted is usually neglected in other ways as well, and thus may be far from fit and in a debilitated condition. It is not because of the animal's physical condition that lice are present, but rather because of the general neglect.

Cat lice spend most of their time not on the skin but crawling through the hair, and it is to individual hairs that they stick their eggs. Treatment with insect powder may kill lice or cause them to leave the cat, but such powders seem to have little effect on the nits. Thus frequent applications of powder will be necessary to dispose of the young as soon as they are born, but as even one pair will breed very rapidly, and soon have a number of generations of descendants, the task is not easy.

Izal is an excellent substance for mixing with soft soap to form a shampoo, and in bad cases this wet treatment may be advisable. Washing will also remove many of the eggs, and thus decrease the number of the next generation. Paraffin, although most effective, should never be used on cats.

Obviously a perfectly-groomed cat can obtain lice from a cat who is acting as host to them, and consequently a careful inspection must always be made of any new cat introduced to the cattery.

Lice can live a considerable time and even breed when away from the host. Thus infected quarters must be very carefully cleansed. Provided cats can be kept out of the particular house for a few days, a good washing of floors and dusty corners with paraffin will minimize the risk of re-infection.

Powders such as Pulvex, which have already been mentioned in connection with the eradication of fleas, are also useful for lice.

Liquid Paraffin

This substance has a number of uses in the cattery and a supply should always be ready to hand.

It is most commonly used to combat constipation, a disorder to which cats seem to be singularly prone. Liquid paraffin may be used with complete safety even with very small kittens, but naturally the dose must be regulated to the size and age of the animal. With a kitten a month old one drop may be sufficient to produce a bowel motion, whereas a full-grown cat may need as much as a full teaspoonful. Whenever possible it is far better to give several small doses rather than one maximum dose, for, although this substance passes through the bowel unchanged, it does very easily liquefy the fæces. The aim is to produce a movement of the bowel, but a loose motion has obvious drawbacks and should be avoided if possible.

Fortunate is the breeder who can train his cats to take liquid paraffin from a spoon, for this is by far the easiest and cleanest method of administering it. A kitten which is trained to this method young is easy to manage when it is full grown.

Some cats do not object when the paraffin is mixed with their food, so there are a number of possibilities to be explored before one is compelled to use a capsule or to pour the oil into the mouth from a spoon.

When the animal is so constipated that doses given by the mouth produce no effect, an enema of warmed liquid paraffin may be given, and this usually will, within an hour or two, produce the desired effect.

If a kitten becomes lodged in the vagina and expert assistance is not available, an injection of this same oil will often lubricate the passage sufficiently to allow the kitten to be withdrawn either by the aid of forceps or the fingers. Treatment of this kind should not be undertaken by the novice but should be left to the vet. It is only after years of practical experience that the breeder should attempt treatment which is complicated and may be dangerous. There is a great deal to be learned by watching a vet. experienced with small animals, and it is in this way that finally a breeder may attempt such treatments when an emergency arises.

Liver (Food)

Liver is a very valuable addition to diet, but a great deal of care must be exercised to ensure that the liver used has come from a fit animal. If one can purchase from the family butcher meat which is fit for human consumption then there need be no anxiety. The liver of poultry and rabbits, however, should always be regarded with the greatest suspicion, as in both cases diseased livers are not uncommon. One must also bear in mind the fact that it is possible to pass on internal parasites by feeding liver ; particularly is this the case with rabbits' livers. A liver that is spotted should always be regarded as unfit for use, and under no circumstances should any other than that of the calf or sheep be fed until it has been thoroughly cooked.

It would be unwise to give a large quantity of liver to any animal that was not used to it, for liver is laxative in action. One can accustom a cat to take small quantities once or twice a week, and in these circumstances the laxative action is definitely an advantage. Many cats kept under unnatural conditions are inclined to constipation, and for them the addition of liver to the diet acts as a helpful corrective.

As with humans, so with cats, liver can be of great help in cases of anæmia, but when used for this purpose small quantities should be added daily to the food for some weeks.

Sometimes it is very difficult to get a cat to start eating again after a serious illness, and with such cases a few pieces of raw calves' liver will often solve the problem.

M

Mange

There are two distinct types of mange, both of which, however, are parasitic in origin. One type is usually confined to the head and neck, with occasionally the elbows of the front legs affected, while the other is much more widely spread over the body.

Although it may be of interest to be able to recognize both types, it is doubtful whether this ability will be of any practical value to the cat owner, as the same treatment will do for both types. In each case the object is to kill the parasite and its eggs, and for this purpose a mixture of grease and sulphur is the usual base of the ointments one can purchase. Proprietary remedies such as Sulpho and Kur-Mange are usually most efficacious.

Sarcoptic mange, which usually confines itself to the forepart of the cat, can be recognized by the small, watery pimples visible on the surface of the skin. The cat often scratches these, and then the bare place becomes partially covered with a yellow crust. In the case of follicular mange the skin develops a bluish tint and often becomes thickened and hard. There are no obvious pimples with this type, but one may observe a number of watery blebs. These blebs contain pus infested with the parasites.

When treating either type the hair should be carefully shaved round the affected area and ointment then gently rubbed in. As it is much more difficult to kill the eggs than the parasite itself, treatment must continue for at least three weeks. Obviously it is an advantage to notice mange before it has developed very far, but if there has been neglect and the bare patches are widely distributed over the body, it is not wise to treat all of these areas at the same time. Cats hate the greasy mess which the ointment makes of them, and spend a lot of time licking themselves in an effort to clean up. In cases where the trouble is widespread, the cat usually loses condition rapidly. In some instances the blood stream seems to be affected by the toxic matter produced in the festering sores, and in very bad cases

death may follow. When that happens, however, the owner must hold himself largely responsible for the unhappy outcome, as if treatment is applied early, complications are rare.

Good food and fresh air are both essentials for the cure of any animal attacked by this comparatively common ailment of cats.

Mange is highly contagious, and consequently great care must be taken where a number of cats are kept to prevent the disease from spreading. Isolation is, of course, imperative, and the attendant must exercise great care to see that parasites are not transferred on either his hands or clothing.

Everything which has come in contact with a cat suffering from this disease must be thoroughly disinfected. All woodwork should be scrubbed with hot water and soda, and then, if possible, should be subjected to the intense heat of the blowlamp. Everything that can be washed should be soaked in a strong solution of Dettol, and one cannot take too many precautions to see that the patient does not itself become re-infected. Laboratory tests have shown that the parasite can live for many weeks even when isolated from the host, and consequently it is an excellent plan not to use quarters or utensils for at least six weeks after a case has been cured.

Mating

Quite early in one's career as a cat breeder the problem usually arises as to whether one should keep a stud or send the queens away to be mated. There is much to be said on both sides, but stud work is not as simple as it may appear, and both skill and courage are needed if such work is to be carried out satisfactorily.

Where only three or four queens are kept, that number is not sufficient to satisfy a well-developed and keen male, and thus, if he is to be kept fit and good-tempered, he must also be placed at public service. In normal times a stud must have done well on the show bench if his services are to be sought by any except local fanciers who prefer not to send their queens away by rail. Thus, one of the first requirements of the stud is that he should be a typical specimen of his breed, and also above the average in quality. While he is still regarded as a show specimen his services at stud should be strictly limited, for a male that is much used in this way is rarely in show condition. It would be unwise to show him unless his chances of success were good. When he has done well on the bench it is a good plan to retire him for stud purposes alone. He will probably be a better stud when he is no longer exposed to the tensions and nervous strain of public exhibition.



CHINCHILLA

Left : THISTLEDOWN ROMULUS

Right : CH. PEGGOTY ANNE OF PORCHESTER

The stud cat should be kept in quarters which are well removed from the general cattery, for when outside queens are received there is always a serious risk of introducing infection.

When a visiting queen arrives she should be inspected very carefully before she is introduced to the stud house, and if there is the slightest suspicion that she is unfit she should be returned, although such a course may produce ill-feeling. Naturally no fancier would send a queen to stud if there were any definite sign of illness, but as symptoms may not always be obvious when the queen is despatched, the stud owner would be most unwise to take unnecessary risk. If it is possible, the female should be allowed to spend her first night alone before being brought in contact with the male, and provided the queen is sent early in her period of calling, this will allow her to settle down after her journey. There is little likelihood of her being out of season by the next day.

As has been stated in the section dealing with the stud house, it should contain two compartments separated by a wire netting partition. Into these the stud and queen should be placed separately. It is always unwise to place them together without this preliminary introduction, as some queens are very spiteful when they are in season, particularly when the male is one they do not know. When in separate compartments which prevent serious fighting, they usually become quite friendly in the space of a few hours, and instead of spitting at each other, both will start to croon quite happily. When this stage has been reached the queen should be released and allowed for a short time to wander at will round the stud house. The stud may then be allowed to make similar enquiries while the queen is again confined. After these preliminaries the actual mating may be attempted.

On the floor of the house there should be a strip of carpet fixed in such a manner that it cannot slip, and the queen should be placed on this with her back to the male who, if he is experienced, will mate her almost before she knows what has happened. Before he mates her the stud grasps the queen firmly in his teeth by the fur at the back of her neck. As soon as the mating is complete the wise male jumps away and up on a shelf which should be provided for him, as he probably knows from experience how spiteful a queen can be after a successful mating.

Queens have various ways of showing that the mating is successful; some of them scream loudly while others merely growl, but all of them roll violently and then start to wash themselves with great vigour. The male will also perform his toilet.

Mating is not always the simple matter that has been described, for some queens are very difficult and will not stand to permit the mating. With a queen of this type the stud owner may have to expend much time and patience before mating is accomplished. Stud work is then not easy, and the attendant frequently has a number of bad scratches to put against the debit side of the mating fee. Few queens, however, are impossible, and perseverance will usually be rewarded. It is a great mistake to allow either the stud or the queen to remain in a state of great excitement for more than about ten minutes at a time.

One mating is all that is really necessary, although most stud owners prefer to give a second mating to prevent the return of the queen a few weeks later because the first mating has not been successful.

When the mating has been achieved, the queen should be removed from the stud house and allowed to rest for some hours before being sent on the return journey. Whenever possible it is better to allow her to rest until the next day.

Matted Coats

One of the penalties of allowing long-haired cats comparative freedom outdoors is that one usually finds that the coat requires much more attention if it is to be kept in perfect condition. This, however, must not be regarded as a reason for keeping the animals shut up, but rather as a suggestion that the coat should be dealt with daily so that it does not become hopelessly matted. It is the fur under the body and on the legs which is usually most affected, and if small lumps of matted hair are dealt with daily one is rarely faced with a solid mass of fur which takes much patience and time to disentangle.

When a lump of matted hair is found it should be moistened, as damp fur is considerably easier to untangle than when it is dry. A blunt-ended knitting needle made of metal is very useful for the purpose, and in most cases will free the coat in a few minutes. Obviously the blunted end of the needle is a disadvantage, but it is never safe to use a sharp-pointed instrument which one may unconsciously stick into the animal's flesh. If the undercoat has become solid like felt, which is always a sign of serious neglect, it may be necessary to cut out the matted hair with a pair of blunt-ended scissors. It is unfortunate when this remedy is necessary, as the appearance of the cat is temporarily ruined, and it will be many weeks before new hair grows to hide the damage.

Some cats develop a very greasy coat, and fur which is in this



A DELICATE OPERATION

condition mats very easily. To get rid of the grease a bran bath from time to time is excellent, and in the intervals of these baths plenty of powder and brushing will keep the fur in satisfactory condition.

Quite often a solid mass of fur is formed round a small piece of stick or a burr which has been picked up while the animal was running free. Thus it is always wise to feel for such foreign bodies and remove them at the daily grooming.

Some breeders clip the underside of the body of long-haired cats in summer, leaving the fur little more than half an inch in length. This will prevent a good deal of trouble and do little to spoil the appearance of the cat if done skilfully. For breeders this may be a very satisfactory plan, but of course such a cat

could not be successfully shown until the coat had again grown to its normal length.

When dealing with these coat troubles never exhaust the patience of the cat or the operation will become much more difficult. It is far better to do a little at a time than to make the animal bad-tempered.

Maturity

See Age for Breeding (Females) and Young Stud.

Meat

Meat must form an essential part of a cat's diet. Whether this meat should be raw or cooked has caused considerable argument, and much can be said for both kinds. Unless, however, one is sure that the meat used has been passed as fit for human consumption, it is never safe to feed it raw. If the purchase is made from an animals' meat shop, never feed it raw; if it comes from the ordinary butcher, it can be fed raw. Some cats have to be trained to eat raw meat if they are accustomed to cooked. Two precautions must be taken. In the first place one must be absolutely sure that such meat is fresh, and secondly, if it has been frozen it must be completely thawed before use.

Horse Meat

This is extremely popular with cats. There are two grades, one which has been passed as fit for human consumption, and the other for animal feeding alone. The difference in price is not large enough to make it worth while to buy the lower grade. Some horse meat can be extremely tough, but on the whole there is little difference between this and beef. The flavour of horse meat is also very similar.

Beef

Lean beef is an excellent food, and steak has no superior for animal feeding. Beef, however, like horse, is a difficult meat to digest, and for this reason one must be very careful when feeding it to young kittens. When raw beef is fed it should be in very thin strips obtained by scraping. Cooked beef, although more concentrated due to the removal of much of its natural water, does not seem to cause more difficulty in digestion.

Mutton

This is a fat meat, and cats do not tolerate fat easily. Boiled mutton, however, when the fat has been skimmed from the pot, is an excellent basis of a meal and is easily digested.

Pork

Few cats relish pork, and as it is usually very fat it cannot be regarded as economical. A hungry cat will eat it, but if it can be avoided it will be a good thing.

Rabbit

Rabbit is an excellent meat, and cats are very partial to it. The carcase should be well boiled, and the meat must be separated from the bones. Rabbit bones are very brittle and therefore dangerous. Although to prepare a meal of rabbit takes more time than most meats, it is such a valuable source of protein that the labour is well worth while. With imported rabbit which has been frozen one must make sure that decomposition has not started. Dogs can eat tainted meat without unfortunate consequences, but the same cannot be said of cats.

Game and Poultry

Usually the cost of such meats prohibits their use in the cattery, but this is no serious loss, for when fed fresh, as they must be for cats, their flavour is too delicate to be attractive. If poultry is used, however, the same care with bones is necessary as with rabbit meat.

Liver

A little liver is an excellent addition to a meal, but considerable discretion must be exercised in its use, for it has a definitely laxative effect. A cat which has been ill and has lost its appetite may sometimes be tempted to eat with small pieces of raw liver. When used in small daily quantities, liver is also an excellent tonic in cases of debility.

Medicine

See Administering Medicine.

Medicine Chest, The

With animals from time to time there is bound to be illness, and it is highly important that in such cases treatment should be immediate. The sooner a remedy can be applied after diagnosis, the greater are the chances that an acute stage can be avoided and a quick cure obtained.

On the other hand, one cannot rely on the immediate arrival of a vet., and it is, of course, not always necessary that one should be called if the illness is easily diagnosed and the remedies simple.

It is neither difficult nor expensive to provide a medicine chest

containing simple remedies which can be used in case of need, but it must be emphasized that it is useless to endeavour to prepare for all possibilities. The simplicity of the contents of the chest will certainly add to its value.

A supply of empty gelatine capsules is a first necessity, and these should be in several sizes as has been suggested in the section dealing with these useful containers. Their great value lies in the fact that they make the giving of medicine in powder form much simpler.

A clinical thermometer should always be kept exclusively for the use of the cats. A cat or kitten that is listless, and which displays lack of appetite, should have its temperature taken. To get a correct reading of body temperature the thermometer should be inserted into the rectum. For use on the end of this thermometer, and for various other purposes, a jar of vaseline must be obtained.

A feeding spoon should be provided, and this will be found useful on many occasions. When a cat has to be given a considerable quantity of liquid, either as food or as medicine, an ordinary spoon with its wide lip presents a number of difficulties, and frequently much of the liquid is lost. It is thus difficult to estimate the size of the dose that has been given. If the liquid is at all oily in character, the coat is made unsightly. Messrs. Sherley, however, sell a feeding spoon with a spout at the end, and this proves extremely useful. The bowl of the spoon will certainly hold sufficient for any ordinary purposes, and if the spout is placed in the side of the cat's mouth, the flow can be regulated in such a way that there is little risk of any going " the wrong way ".

A packet of cotton wool must be regarded as an essential. Cotton wool has many uses in the cattery, and is necessary for the treatment of canker, any form of eye trouble, and any affections of the mouth or gums entailing the use of mouth-washes.

A bundle of orange sticks will frequently be found of use, for with them one can deal with canker quite simply. They are much to be preferred to matchsticks for this purpose, as a matchstick is too short to manipulate easily, and the wood of which it is made breaks far too easily for safety.

The next suggestion is one which should be regarded with a certain amount of misgiving. It is that the medicine chest should contain a hypodermic syringe. The misgiving is due to the undoubted fact that a hypodermic is without question a most valuable instrument, yet in the hands of the unskilled it may become a very dangerous weapon. No breeder should

ever attempt to use a hypodermic until an expert has shown how it should be used, and who has also a definite knowledge of the uses to which it may be put.

A pair of scissors always ready to hand is an obvious advantage and needs no comment.

A certain number of remedies must now be prepared against the common ills of the cat.

No doubt the first suggestion will arouse some controversy, although it is based upon practical experience and is not merely theory.

A supply of M & B 693, or better still, 760, is a most valuable safeguard, and should be found in every medicine chest. This sulphanilamide drug cannot be purchased without a prescription, but the vet. who is the recognized adviser for the cattery will almost certainly be prepared to supply a quantity sufficient for use until he can pay a personal visit. Tablets sold for veterinary use are mauve in colour, and the most useful size for both cats and kittens is $\frac{1}{8}$ gm. (·125 gm.).

A serious illness in its onset rarely shows alarming symptoms, but progress may be very rapid if no precautions are taken. When the temperature of a cat exceeds 102° and the animal is obviously off colour, then is the time to act unless one can attribute some cause for the symptoms. With kittens, however, it is probably wise to allow the temperature to rise another degree before feeling alarm. Kittens are like human babies whose temperatures are up and down again within a very short space of time.

When a cat is unwell and the temperature persists for several hours, it is an extremely wise precaution to administer M & B. In the case of a kitten two tablets may be given, and a full-grown cat may have four. This makes a quarter of a gramme for a kitten and twice that quantity for an adult. Four hours later half this dose may be given again. If by this time the animal is worse, the vet. should be informed and at the same time he must be told of the dose that has been administered. If he cannot at once visit the patient he will probably recommend a similar dose every four hours until he arrives. When doses of this size are given there is little danger, although it is wise to restrict the diet, provided that the cat is prepared to eat, to plain meat to eat and water to drink. It must not be thought that M & B is a cure for all ills; that is far from the truth.

A bottle of liquid paraffin will be very useful, as cats of all ages are addicted to constipation if feeding and exercise are not arranged with particular care. As a matter of general

practice it is a good plan to give cats a regular dose of liquid paraffin each week. This not only ensures satisfactory movement of the bowels, but is particularly valuable in helping to pass fur through the system during the moulting season.

A remedy which should always be at hand for kittens is one which will check diarrhœa. For this purpose a bottle of the Parke Davis No. 21 tablets should be purchased. It is a mixture of that very ancient remedy subnitrated bismuth together with saccharated pepsin and aromatic powder of chalk. Undoubtedly there are on the market many other tablets equally efficacious, but this one has proved most valuable on many occasions.

It must be remembered, however, when treating diarrhœa, that it is not sufficient merely to suppress the symptoms. The cause of the trouble must also be attacked. A few ounces of an indigestion powder recommended by the vet. should be kept in a screw-topped bottle so that it is at hand in case of need.

A bottle of disinfectant will always find many uses, and it is wise to select one which has not too strong an odour. Cats have a very sensitive sense of smell, and can be alarmed by smells almost as much as by noise. Dettol has been found a very satisfactory disinfectant for the cattery.

Finally, two other articles should be purchased. They are canker powder and canker lotion. The powder, if used regularly, and regularly means once a week, should make the use of the lotion almost unnecessary.

It would be simple to put forward arguments for the inclusion of many more things in this medicine chest, but what has already been suggested should be sufficient for all normal purposes.

Metabolism

See Brand's Essence and Fatness (Obesity).

Milk

Milk is the perfect food ! This statement, which is often made, cannot be accepted, however, without certain qualifications, for we often find with cats and kittens that milk proves to be a most unsatisfactory food. It is, of course, natural that the milk provided by the mother should be satisfactory for her children, although even this is not always the case.

Milk usually means cow's milk, and it is definitely not a fact that this particular type of milk is always suitable for cats. There are cats who can take any milk, including cow's, without any ill effects, but to others it is almost poison and produces gastric troubles which are difficult to cure.

When weaning kittens most breeders try milk, and if the initial quantity is very small and is only increased very gradually, trouble may be avoided. It is quite possible that during the early stages of weaning, when the mother is still providing the main part of the kittens' food, her milk will act as a corrective. When the kittens are fully weaned it not infrequently happens that they cannot tolerate milk. In this matter of giving milk to cats one must be guided entirely by results. It is a cheap and easy way of providing food, but results may make it expensive unless one is prepared to be guided by one's own experience. The experience of other breeders is of little value.

The commonly held idea that cow's milk is too strong for small kittens is entirely wrong. The truth of the matter is that cow's milk is deficient in solids when compared with that of the queen. It is far wiser to use only the top of the milk, which is far richer. The kitten's stomach is small, and it is only capable of dealing satisfactorily with concentrated foods. If concentrated foods are not given, larger quantities have to be taken to obtain the necessary nourishment. It is this increased digestive labour which cannot be undertaken by the kitten's stomach without revolt.

On the whole goat's milk is more satisfactory, and both cats and kittens soon learn to like it. It has a considerably higher fat content than the average sample of cow's milk, and only falls lower in the matter of milk sugar. If one can obtain a regular supply of goat's milk it may form a very useful article of diet, but, unfortunately, few breeders are able to be sure of a regular supply. In the past a few breeders have kept one goat or more with this object in view, but there are not many cat owners so happily situated that this is a possibility. Some years ago there was a dried goat's milk on the market, but whether due to lack of popularity or difficulty of supply of the raw material, it soon disappeared.

In normal times there are several varieties of dried milk for animal use on the market, but these disappeared soon after the outbreak of war. Lactol and Martinmilk both had enthusiastic users, and in most respects they were preferable to any form of natural liquid milk. When a choice of varieties of dried milk is again available to the cat breeder, it should not be difficult to find one that is suitable.

Although milk may be regarded as a complete food for a small kitten who merely feeds and sleeps, it certainly cannot provide sufficient nourishment for an active animal unless the quantities taken are too big to be practicable. From the time

that the kitten really becomes active, solid additions to a milk diet soon become essential.

The house cat which is presented with a saucerful of milk twice during the day is not being fed adequately, and it will have to search for its own food. Some house cats, unhappily, do receive such inconsiderate treatment.

To conclude one may say that milk may be very useful in the cattery, but it is by no means an essential. As a drink it has its value, and as an addition to diet it has much to recommend it, but many cats which are both well-developed and healthy never have any liquid to drink except fresh water.

Mineral Deficiency

See Feeding and Vitamins.

Miscarriage

There are occasions when a queen gives birth to her litter before the sixty-third day is reached. This often means the loss of the litter, for kittens do not survive if born before the sixty-first day, although they are actually born alive. Such kittens will feed, but they rarely make progress and usually die on the second or third day. It must be stated, however, that it is possible to rear a litter born nearly a week before time.

In actual experience one meets with two different types of miscarriage. In the first of these the queen carries her kittens for six weeks or longer, and then for no apparent reason gives birth to a number of embryos which at the time of birth are actually dead. With a miscarriage of this type there is often a considerable amount of bleeding, with a copious vaginal discharge which may last for a number of days. When this happens to a maiden queen one should regard her with suspicion when she is again mated, for some queens will lose their kittens in this way time after time. In any case, if a queen has a miscarriage and one cannot attribute a reasonable cause for the mishap, it is always wise to consult the vet. When the same misfortune happens with two successive litters, one must assume that there exists some form of serious uterine disorder. Probably there is inflammation which may be cleared up by using M & B 693 or 760. Fortunately a queen is rarely ill as a result of a miscarriage, but it is wise to regard her as an invalid until such time as there is no longer any discharge and until her appetite is again normal.

The other type of miscarriage is that which is definitely caused by fright. All cats are not alike temperamentally, and some are at all times highly sensitive and nervous. The most frequent

cause of fright is noise, and even a bad thunderstorm may cause a nervous queen to produce her family before its time. The critical time in such cases seems to be after the end of the seventh week of pregnancy. Thus during the last fortnight it is wise to keep a queen who is having her first litter in the place where the kittens are to be born and where she is not likely to be disturbed by unusual sights and sounds. All queens, whether maiden or proved breeders, should spend the last few days quietly by themselves.

A fall during the last fortnight of pregnancy may bring on labour and cause the arrival of the family, so every attempt should be made to prevent climbing. A room which the queen knows, with furniture which she has negotiated before, is the best safeguard.

Even when a bad fright does not cause premature birth, the kittens which are produced at the right time may be abnormal. It is not uncommon for them to be born with their eyes open, and such kittens rarely become completely normal. Open-eyed kittens often have eyelids which are partially paralysed, and the cat is never able to open them fully.

Unless there is some physical abnormality of the female, care on the part of the breeder will usually ensure that none of his queens suffer from a miscarriage. In any case this misfortune is rare.

Mongrel Litters

When queens are allowed almost unrestricted liberty sooner or later one of them will be mated by some marauding tom. To the breeder of pedigree cats this is a minor tragedy, for the chances are that a mongrel litter will follow with no possibility of pedigree kittens from this queen for a further six months. The fear of such a mischance often means that females are so much confined that they have no chance of living an unrestricted and therefore natural life.

Usually one can tell when a queen is coming into season, and there is thus every opportunity of taking precautions to see that there is no misalliance. There are, however, some queens which run off to get mated before they have shown obvious signs of calling. They are so few that there is no justification for condemning all females to confinement.

Even when a queen is shut up accidents may happen, and a stray tom may gain access to the queen or she may escape. Until recently there was little that was done about these stray matings except to accept the unwanted litter with as good a grace

as possible. Veterinary science has, however, recently provided a remedy which is successful in the majority of cases.

Stilbœstrol, a May & Baker product, is a compound whose action physiologically is very similar to that of the natural œstrogens which regulate the œstrus cycle. Experience has shown that a suitable injection of Stilbœstrol, if given within thirty-six hours of mating, will very probably prevent pregnancy. The scientific aspects of the case are outside the province of this book, but one can give a simple explanation of what probably happens.

For kittens to be produced the fertilized ova must become implanted in the wall of the uterus where they will gradually develop until the time of birth. Stilbœstrol prevents this implantation and usually produces for a few days a period of violent " calling ". After this it is too late for any fertilized ova to implant themselves. Obviously such injections must be carried out by a veterinary surgeon.

Quite a number of queens have been saved from having a mongrel litter by this method with apparently no ill effects, as when later they came into season they were mated with success. The interval between this artificial season and the next natural one may be a little longer than is normal for the queen.

Breeders who keep a number of queens would be well advised to discuss this treatment with their vet. At some later date it may save much disappointment.

Moulting

Moulting is a perfectly normal process and takes place twice a year, in the spring and again in the late autumn. Obviously the growing of a new coat makes definite demands upon the body, but these can be quite easily met by a cat in sound condition.

Cats seem to have an individual rhythm for the moult, and the individual usually starts about the same time each year. The length of time taken to complete the moult may vary according to the animal's condition, but the owner, by careful grooming, can do much to ensure that the new coat is grown as quickly as possible. The removal of all dead hair greatly facilitates the process of new hair growth, and consequently one should be at considerable pains to get the old hair out. Gentle plucking, by using the thumb and first finger, is an excellent method, and provided that the task is undertaken with due care, no damage will be done to the new fur. One must remember that the sole object of this plucking is to remove dead and loose hair.

Quite naturally the animal develops its heaviest coat for the winter, and if one is aiming at success in the shows which start about November, the new coat must be fully grown by that time. Hard grooming and plucking in August will help to achieve this object. Animals grow their coats to meet a natural need, and consequently temperature plays its part in deciding the fullness of coat that is grown. Bearing this fact in mind, the owner who wants a thick and flowing coat can bring Nature to his assistance, but one must also remember that coarseness of coat may be produced when temperatures are too low.

Some cats always seem to be moulting, in fact, no sooner has one coat started to be shed than the same process is continued with the new one. There are plenty of theoretical cures for this state of affairs, but few of them seem to be of much practical value. A cat of this type may, in all other respects, seem to be perfectly normal and abundantly fit. In fact, there seems to be little correlation between physical fitness and the condition of the hair follicles. The same condition obtains in mankind where baldness certainly cannot be regarded as a sign of unfitness except in the case of the hair itself.

Tonics may be given, and it is unlikely that they will do any harm, but it is rarely that they will remedy the condition. Massage is certainly valuable, for it will stimulate the circulation in the skin and provide a better blood supply for the hair roots. Beyond that there is little that one can do unless one is convinced that the trouble with the particular individual is due to some physical disturbance which requires the advice of the vet.

Mouth

See Teething.

N

Nasal Catarrh

See Catarrh.

Neuters

It is quite impossible to keep an entire male about the house as a pet because of his objectionable habit of spraying.

Thus the male which is not to be used for breeding should be neutered. The operation to produce this state is perfectly simple, and causes little apparent inconvenience to the cat. It must be emphasized, however, that the breeder should not attempt the operation himself, for damage of a serious kind could be the only result of lack of skill.

Until the male cat is about three months old the testicles remain in the abdomen, and as they cannot be satisfactorily removed until they have descended, it is useless to take the animal to the vet. under three months. Breeders are often asked by purchasers to have male kittens neutered before sending at eight or nine weeks, but if the elementary facts were understood such requests would not be made.

Although this operation causes the male little inconvenience and practically no pain when it is performed at an early age, the law demands that a general anæsthetic shall be used if the animal is over six months. Because of this fact it is usual to have males castrated soon after they are three months old.

Whether this is a wise policy is a debatable point, although it has much to recommend it on the score of convenience. It really requires someone with considerable scientific knowledge to assess the merits of early or late castration.

In cats, as in other mammals, the sex organs produce a hormone which is passed by them into the blood stream. It is this hormone which imparts the sex characteristics to all parts of the body. If the testicles are removed this hormone obviously cannot be passed into the blood stream, and thus the development of the animal is profoundly affected.

Furthermore, the secretions of certain glands connected with the reproductive system affect the general metabolism of the

body, and it is probably for this reason that neuters are inclined to put on weight, and sometimes develop into cats whose size is much above normal.

Probably so far no one has considered the matter sufficiently carefully to give a considered opinion, but the possibility certainly exists that castration might well be postponed until the animal has developed physically along normal lines for the first year of its life.

Some breeders regard the neutering of a male who may have had sexual satisfaction as being cruel, but this attitude would appear to neglect the fact that castration not only makes procreation impossible, but at the same time probably removes all sexual desire.

Neuters frequently become most affectionate companions, and, if carefully fed, remain alert and active for many years.

Nipples, The Care of

With a maiden queen the nipples are very small, and it is only after the first month of pregnancy that their size increases. When the family has been reared, the nipples again become smaller, although they rarely return to their original size.

Quite a number of the minor troubles produced in nipples would be avoided if they were given attention after the queen has had a family, and before the next is due to arrive. It is after the suckling period, and while the nipples are still large, that dirt frequently gets into the passage which runs from the tip of the nipple into the milk gland. This may not cause trouble at the time, but can help to produce a blind teat at the next lactation. Careful washing from time to time with soap and water is certainly advisable until the nipple has considerably decreased in size and its opening has become closed.

Before the next family is due it will often be found that the nipple has become encased in a hard, dry skin. This can be removed by gentle massage with olive oil.

It must never be forgotten that kittens sometimes obtain worms from their mothers through eggs which are taken in with the milk. If both the nipples and the fur round them are carefully cleansed with soap and water several times during the week before the birth of the kittens, much of this danger will be eliminated.

Nursing a Sick Cat

Caring for sick cats is most exacting work for the simple reason that when a cat is seriously ill it rarely seems to show any strong

desire to live. With a patient in this state the difficulties of the attendant are greatly increased.

A cat that feels ill will usually refuse food, and consequently if there is a prolonged period of starvation there is a very real danger of collapse. Such a condition is always critical and must be avoided at all costs. To achieve this object the strength of the animal must be kept up by hand feeding concentrated but easily assimilated foods, such as Brand's Meat Essence, at regular intervals of about two hours. A few drops of brandy and water, to which glucose has been added, will also help to maintain strength. A third of a teaspoonful of brandy to a dessert spoon of water is a satisfactory mixture.

Warmth is of supreme importance. As the animal is taking no exercise in addition to the fact that it is taking insufficient nourishment, it means that the production of body heat is very slow. Artificial heat must, therefore, be provided, and this can best be done by hot bottles in which the water is renewed every few hours. One can regulate the heat satisfactorily by varying the number of thicknesses of blanket which cover the bottle.

Although warmth is essential, under no circumstances should the animal be nursed in a stuffy atmosphere, for an abundance of fresh air is essential to convalescence. Provided that the cat is kept away from all draughts, the freer the circulation of air the better.

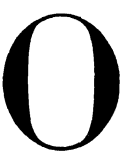
A cat usually makes better progress in illness when it is nursed by a person it knows, and in surroundings to which it is accustomed. To send a sick animal to a vet. to be nursed when the illness is one which can with a little trouble be dealt with at home, is unfair. Fortunately most vets. realise this fact, and will not undertake the nursing of a sick cat if it can be cared for in its own home. A sick cat is usually frightened by its pains and the general feeling of malaise, and thus the confidence given by a nurse for whom it has affection is of very great value.

Quiet and rest are both extremely valuable aids to cure, but a sick cat should not be allowed to become dirty with matted coat due either to excreta or spilled food. Every attempt must be made to keep the animal comfortable, and some gentle grooming should be done each day. The coat can be combed without removing the patient from its bed, and this slight disturbance is not likely to have any harmful effect, especially as the cat will be undisturbed for a long period afterwards. A sick cat does not wash itself, and thus when food has been given the lips and the fur round the mouth should be carefully wiped

with moist cotton wool. When the animal starts to wash its face after food, one can feel quite confident that real progress towards complete recovery has been made. These details may seem trivial, but most human beings know what a difference a wash and brush-up makes to one's morale during an enforced stay in bed.

When a sick cat starts to feed again of its own free will, the greatest care must be taken to see that the meals are small in quantity. Whatever the illness has been, the digestion must gradually be accustomed to its work, and any indiscretions are likely to produce sickness and diarrhœa with the possibility of a relapse. After some illnesses, particularly distemper, a relapse is likely to prove fatal.

The nurse who expects to see rapid progress after a serious illness is bound to be disappointed. Actually progress usually seems to be extremely slow, and from time to time there are bound to be temporary setbacks. Patience of the highest order is required, with a full realisation that several weeks may be needed to nurse a sick cat back to health so that it may again lead a normal life. It is not everyone who possesses the right temperament for the task of tending the needs of sick animals.



Obesity

See Fatness.

Odd-Eyed Cats

See White Persians.

Œstrum

See Season, Signs of.

P

Painless Death

From time to time one is forced to the conclusion that a cat or kitten must be " put to sleep ". Naturally such a decision is a painful one to have to make, but no fancier can hesitate when it is obvious that a kitten cannot grow up to be a strong, healthy cat, or when an older cat is suffering to such an extent by reason of an illness in which death is merely a matter of time. A sick cat is very unhappy, and it is unfair to ask it to endure pain when recovery to full health is an impossibility.

Whenever possible the animal should be painlessly destroyed by the person to whom it is most attached and in whom it has the greatest confidence. It is certainly cowardly to take the animal to a vet. to ask him to deal with the matter unless one is prepared to stay with the animal until it is dead.

The kindest method of destroying a cat is one which neither alarms it nor causes pain. These considerations quite definitely rule out certain methods which are used, for, although they may cause no actual pain, the animal is afraid and in a state of mental distress until it becomes unconscious. If any fancier has seen a cat destroyed by being placed in a box with a chloroform pad he will know well the distress of the cat until the fumes have brought a merciful unconsciousness.

An intravenous injection of nembutal will produce anæsthesia in a very short time, and if the dose is correct the animal will not regain consciousness. Nembutal can also be obtained in capsule form on a prescription from a vet., and for kittens up to about four months a 1½-gr. capsule produces heavy sleep in about fifteen minutes, and the kitten will usually be dead in half an hour. To produce death the dose must be increased according to the size of the cat. The vet. will decide the quantity to be used.

To make perfectly sure of a quick death chloroform on a pad may be placed near the animal as soon as it is heavily asleep as a result of the nembutal.

Death, when produced in this way, causes no distress to the

cat, and the owner has the satisfaction of knowing that no more humane method could have been employed.

Paralysis

Although paralysis proper is rarely experienced with cats, it is always a possible consequence resulting from accident which has damaged either the brain or the spinal cord.

What might be called a type of false paralysis is sometimes met with in a cat suffering from very bad ear canker. In this case the head is usually held on one side, and the animal, after a few staggering steps, falls over on its side and for the time being seems incapable of further movement. Although such symptoms are most alarming to the novice, there is little danger of the condition being permanent if the cause of the trouble is realized and treated. When canker is neglected, an abscess may form, and the toxins produced find their way into the brain and affect its normal function. It is, of course, the brain which controls the movement of the body. If a breeder experiences this trouble, it should certainly be taken as a warning that regular routine inspection and treatment of the ears is always necessary.

Another form of false paralysis is sometimes seen in cats which are suffering from constipation, and the irregularity of whose bowel motion has been neglected for a considerable time. The contents of the intestines become impacted. Somewhere along the length of the bowel this solid mass presses on nerves which control the hind legs, and a temporary paralysis follows. In this case the cat has not lost its sense of feeling, but is unable to control the muscles of the back legs which it drags behind it as it walks. Proof that the cat can still feel in the back feet can be provided by touching the pads with the tip of a pencil. There will be a slight movement of the foot to show that the pencil point has been felt. A cure will in most cases follow immediately upon the evacuation of the bowel, but it is quite probable that this will not be achieved until an enema has been given.

True paralysis is much more serious, and cure is by no means certain.

When the head is damaged there is always a danger that the brain may also be injured, and if any of the bones of the head are fractured, a portion of one of these may press upon the brain. In both cases paralysis is a distinct possibility. As the nerves controlling movement pass from the left side of the brain to the right side of the spinal cord, it follows that when one side of the brain is damaged it is the opposite side of the body which is paralysed.

Sometimes the back is injured, and one or more of the vertebræ may be displaced, with the result that the spinal cord is damaged or compressed and is thus unable to function normally. In this case the paralysis occurs on the same side as that on which the cord is damaged.

The breeder may know that an accident has occurred and may suspect the cause of the symptoms he sees, but it is only a vet. who can deal with the case, and the sooner he is informed of the symptoms, the greater the hope of recovery, as it may be necessary for him to operate. In some way or other pressure on the brain or spinal cord must be relieved before either can function normally.

There are many diseases which may damage the brain or spinal cord, but they are of such rare occurrence with cats that there is no need to describe in detail such unlikely misfortunes.

Parasites

See Fleas, Lice and Canker.

Passengers

Whenever cats are kept in any numbers for breeding one is sure to find that some of the queens are " passengers " only, and at times this fact provides quite a serious problem for the breeder.

One rarely comes across an ordinary female house cat which is not a good breeder, in fact she often breeds too frequently and numerically successfully, with the result that the disposal of her litters constitutes a real problem.

Pedigree cats rarely provide this problem, as one can dispose satisfactorily of all the kittens that are reared. With such cats one is often faced with the fact that the queen is a bad breeder for one or other of several reasons. It may be that although she is sent to stud on a number of occasions she fails to become pregnant, or at times she is mated successfully but is unable to produce her family without assistance, and even then some or all of the kittens are lost. Such queens will definitely be regarded as passengers, and it is very difficult to know what to do with them.

If the cattery is large, and consequently the inmates lose much of their individuality as far as the owner is concerned, the best plan is to have such females spayed, and then to give them away as pets if a suitable home can be found. It is certainly unwise to continue to breed from them, for the possibility always exists that such abnormalities may be passed on in some measure to any offspring which survive.

When only a few cats are kept, the sentimental attachment between cat and owner rarely allows one to discard the animal. It should then be spayed and retained as a house pet, but one must realize that too many non-productive queens are costly.

Obviously the only sane policy is to breed in such a way that passengers are reduced to a minimum. There are a number of sections in this book, based upon scientific fact and combined with the experiences of a number of successful breeders, which may help in the adoption of principles bound in the long run to improve the breeding qualities of our cats. (*See Genetics, Heredity.*)

Pedigree

It is customary when selling kittens to provide a pedigree going back for four generations and thus showing thirty-two ancestors. This has definitely some value, but it is doubtful whether it can do more for the average purchaser than to show that some of the kitten's forebears have done extremely well on the show bench. Such a fact proves very little beyond showing that some particular male or female was of outstanding quality. There is little or no indication that this animal was capable of passing its good qualities on to its children. The fact that a particular male had a son who was also a champion has some bearing, but it would be far better if one could know that the majority of his sons and daughters were above average quality. That, quite naturally, a pedigree cannot show.

Thus the purchaser of a kitten with an outstanding pedigree must realize that there is a limit to the inferences which can be drawn from it, and the successful interpretation of such a pedigree depends also on the knowledge which one can obtain of any other children produced by certain pairs whose names appear on the form. Such detailed knowledge is possessed by few cat fanciers.

It is perfectly true to say that qualities, both good and bad, which are put into any particular mating are very likely to appear again at some later date in a future generation, but it is impossible to predict when or in what combination such characteristics will appear.

When considering pedigrees with the idea of choosing a sire for a female kitten, it is sound policy to try to find a male whose quality was outstanding, and who was prepotent for those desirable qualities. If one should find that a certain sire has produced a number of kittens of outstanding quality, and that one of his sons seems to be able to transmit the same qualities,



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this is the male that one should use. It is always wise to expect only partial success with such a policy, for the production of animals of the highest quality is never an easy task.

It is to be hoped that no reader will come to the conclusion on reading this that an attempt has been made to prove that a pedigree full of champions has no value, for such is far from being the case. There is information of extreme value in every pedigree, but it is not every breeder who has the ability to extract it. The skilful breeder is the one who, from his knowledge of individual cats as well as pedigrees, can so use his information that the majority of the kittens he breeds are above the average. There are some breeders who have this ability as is shown by the consistent successes of their animals at the shows, but there are others who will never develop this skill.

The whole of this section has so far been written from the point of view of producing exhibition specimens, but there are,

of course, other aspects which are equally important; aspects which should certainly receive due consideration.

One would always like to know many other qualities of a cat beyond mere appearance. Stamina, longevity, temperament, to mention only three, are of great importance, and of these a pedigree can tell us nothing. The science of breeding demands much study, but it must ever be remembered that mankind has even now not progressed very far in his knowledge of the laws of Nature.

Phosphorus

See Poisoning.

Phthalylsulphathiazole

This is one of the sulphonamides which can be of great value in treating bacterial infections of the bowels. In veterinary practice it has superseded sulphaguanidine.

One finds cases in kittens when diarrhœa occurs and continues despite the use of the normal methods of checking this distressing symptom of internal disorder.

In such cases Phthalylsulphathiazole may effect a speedy cure. One would not recommend its use without the approval of the vet., but usually he is quite prepared to agree to such treatment when normal methods have failed to effect a cure.

Although Phthalylsulphathiazole is a poison, only a comparatively small quantity of the drug is absorbed into the blood stream, and this is quickly excreted through the kidneys. The dose given to cats and kittens is not sufficiently large to produce dangerous concentrations.

A three-months kitten which is at an age when serious bowel infections can cause a disastrous setback may be given a quarter of a ½-gm. tablet night and morning for a period of seven days. For adults the dose should be doubled, but the frequency of treatment should not be increased. By the end of a week it will be quite clear whether this drug is the correct remedy for the particular case.

Recently a number of cases of infectious enteritis have received this treatment, and in the majority of cases the cat has recovered. As the disease itself is caused by a virus, it would appear that Phthalylsulphathiazole has dealt with the secondary infections produced in the bowel, and has thus given the animal a better chance of overcoming the primary disease.

A vet's. prescription is needed if one wishes to purchase Phthalylsulphathiazole.

Pleasure, Expression of

There are a number of ways in which a cat shows either pleasure or contentment, in fact, it is somewhat difficult to draw a dividing line between these two states of mind, for in most cases pleasure is only a more active form of contentment.

Purring is always a sign of contentment. This is a most remarkable sound, and although many explanations have been given as to the mechanical means by which the sound is produced, no one seems to understand fully this phenomenon of the cat tribe. There are various types of purring in which both volume and quality differ, and it is a most interesting study to try to differentiate between the moods indicated by the variety of sound. When the animal is contented and peaceful there is that slow, rhythmical purr which usually signifies a satisfied appetite and a desire for sleep. The sound gradually becomes slower in its beat, then becomes intermittent, and finally ceases as the animal falls asleep. There is also the purr of violent pleasure as when someone for whom the cat feels a strong affection returns after absence. Now the purring is much louder and the beat more rapid. It is as though pleasure quickens the breathing and at the same time increases its depth, with the result that purring can be heard over a considerable distance.

The idea that a cat only shows displeasure with its tail is an entirely mistaken one. Actually the tail is able to express a whole gradation of feeling from intense anger or high excitement to deep pleasure, as when it is being stroked by a person for whom it feels deep affection. When excited or angry the tail moves spasmodically with short, nervous flicks, or it may wave from side to side in wide sweeps if the animal is very angry but in complete control of itself. When just happy and affectionate the tail will sway slowly from side to side with no sweeping movements. When doing something that it likes to do the cat will often hold its tail almost perpendicular, and it is amusing to watch how only the last few inches at the tip of the tail seem to sway.

Pleasure can also be expressed by the voice, but in this respect there is little uniformity, for whereas all Siamese know how to use their voices to express a whole gamut of emotions, some long-haired cats are almost dumb. There is a language of cats which humans seem unable to understand, although most of them know from experience the basic idea behind the cat's use of his voice. The kindly Dupont of Nemours spent a considerable time in an effort to learn the language of cats, but no one has followed up his amusing research.

A cat can also express pleasure with its front feet. When it is really happy it will often knead with the paws of the front feet and the claws will be extended. As it kneads so it purrs. Although this action is probably associated with a mild form of sexual excitement, it cannot be more than subconscious, for even young kittens can be seen performing this interesting motion.

Finally, the cat can express both pleasure and affection with its whole body. It will purr and wag its tail while it kneads with its front feet, and all the time it will rub its body round the legs of the person who is with it. Most cats are happy by nature and know well how to give obvious signs of their pleasure.

Pneumonia

See Diseases of the Chest.

Poisoning

Very rarely does one find a case of poisoning with cats, but one must be prepared for the unexpected when dealing with all livestock. Most cats seem to possess a sixth sense as far as poison is concerned, but occasionally one will eat a bait that has been prepared for rats or beetles, or even the carcase of a rat or mouse which has itself been killed by poison. Fortunately most poisons used for vermin are not in sufficient strength to cause serious distress.

Perhaps a word of warning is necessary here. Never suspect poison until all other possibilities have been considered. If finally poisoning seems the only reasonable cause, call a vet., unless the actual poison which has caused the trouble is known. When one has any doubt it is far better to keep the patient warm and await skilled advice.

Phosphorus is one of the substances which may cause trouble, for it is an ingredient in a well-known and much used vermin poison. If the cat is known to have eaten phosphorus, a weak solution of permanganate of potash may be given. This is a recognized antidote for phosphorus. If the cat will drink it, sweetened barley water has a very soothing effect on the burned mucus membrane.

Strychnine sometimes causes the death of cats which have eaten beetles poisoned by some proprietary vermin killer containing this substance. The convulsions caused by strychnine are one of the main signs by which the presence of this poison can be suspected. Treatment for this type of poisoning is not simple for the amateur, but if one has any potassium bromide in doses which have been prescribed for cat use, this can safely

be given. Skilled help, however, should be sought if the cat does not immediately respond to this treatment.

Many other poisons could be mentioned, but it is most unlikely that the breeder will ever meet them.

A much commoner form of poisoning is that from coal gas. A cat playing in a room by itself may accidentally turn on a gas tap. Diagnosis in this case is quite simple. The first thing to do is to get the animal out into the fresh air, and if the heart is still beating, artificial respiration should be attempted. As long as the heart continues to beat there is still definite hope of recovery, and the artificial respiration may therefore be necessary over considerable time.

It is a very wise plan never to use on cats any ointments or powders which are known to contain poisons unless such substances have been specifically prescribed by a vet. Ointments and powders useful for human beings may be quite useless for cats whose natural habit it is to lick themselves as part of their daily toilet, or merely because a particular part of the body is sore or painful. Substances containing carbolic or mercury are particularly dangerous.

Portable Houses and Runs

When kittens are bred in a dwelling house it is particularly valuable to have some portable structure so that when the weather is fine the youngsters can be put outside in the sunshine. All growing kittens are the better for fresh air and direct daylight, and yet it is unwise to put them out on a lawn or in a garden unless one can watch them while they are there. A portable play pen consisting of a roofed section, while the remainder of the run is completely covered with wire netting, makes possible all the advantages of the open air and removes the necessity for constant supervision. The covered section is necessary because too much sun during the heat of summer may do more harm than good, whereas if shade is provided, the kittens can seek this when they feel the need.

In warm weather kittens can certainly be allowed out of doors at a month old, and for a mother and her litter a portable structure 6 feet by 3 feet will provide enough space for the kittens to take all the exercise they need at that age. If a 2-foot stretch of the run is provided with a floor, roof and three sides, with only the front left open, all likely needs have been met. Such a shelter and run combined need not be more than 2 feet 6 inches high, as it would only be used for periods of a few hours during the daytime.

When making equipment of this sort for the use of kittens, great care must be exercised to see that there are no protruding strands from the wire netting. If there are a kitten may damage itself seriously. All the edges of the wire netting should be on the outside of the wooden framework, and even there it is safer to cover them with thin, wooden battens.

Post-Mortem

It is only natural that the owner should feel a certain hesitation in agreeing to a post-mortem on a cat or kitten which has been a valued companion and then has died, but the hesitation should only be momentary. Veterinary science can only progress if it is given ample opportunities for research, and this can only be obtained if breeders and owners will help. Both in the interests of the individual breeder and cat fanciers as a whole, it is most important that cases of death which have occurred from causes which have not been fully understood should be investigated by a post-mortem examination. Surely it is a definite responsibility of all who are interested in cat breeding to help in any way possible to prevent the large number of deaths which from time to time are experienced among cats.

Hundreds of kittens die each year with diarrhœa, yet it must be understood fully that the cause of the death is not explained by using the term " diarrhœa ". If breeders could only learn the nature of the bowel infection causing this symptom, there would be a much better chance for the future of combating the trouble and curing cases instead of allowing them to die. Many vets. frankly admit that they do not understand the cause in each individual case, and therefore the remedies which they suggest can only be empirical. If, however, a litter of kittens is affected and one dies, a post-mortem on this one kitten may well provide the clue which will allow the rest of the litter to be saved. To treat a kitten for acute indigestion, when the real trouble is a bacilliary infection of the bowel, may for a time conceal the symptoms, but it will not effect a cure. Kittens die from many diseases in which the only observable symptom may be diarrhœa, but if the veterinary profession is given an opportunity of examining such cases after death, there will be great possibilities of medical progress.

The greatest scourge of the Cat Fancy is infectious enteritis, and yet several attempts to provide a cure for this disease have failed, to some extent because fanciers would not provide the laboratories with sufficient bodies of animals which have succumbed to the disease. It is most important that the body should

be received within twenty-four hours of death, and the fancier who helps in this way is definitely helping to save the lives of future victims. Serums can be prepared for the prevention of the disease, and much experimental work of a useful kind can be undertaken.

By all means let us be sentimental about our cats if we wish, but at the same time sound common sense should impel us to do all that is possible to help to stamp out the fatal diseases to which cats are subject.

Potatoes

See Feeding.

Pot Belly

This expression, although perhaps inelegant, is nevertheless an accurate description of the appearance of some kittens; a condition which, if not remedied at once, will mean death.

The cause of the trouble is digestive and usually the result of the queen's unsatisfactory supply of milk. More often than not such a condition is produced because the queen's milk is too acid and has caused constipation in her kitten. The retention of waste matter in the bowels produces fermentation and the formation of gases which actually cause the distention.

It is far better to be able to notice that things are not right before any visual signs of trouble appear, and the observant breeder will early realize that all is not well with the kittens before there is the slightest sign of pot belly.

For the first month of their lives kittens spend practically the whole of their time either feeding or sleeping, and it is only during the third and fourth week that they show any real desire for exercise. Long periods of sleep after food are signs that all is well, but if a meal is followed by a short sleep broken by restlessness and crying, one can be quite convinced that all is not well. Crying shortly after a meal is invariably an indication that the meal, in this case the mother's milk, was not satisfactory. Now is the time to act. One should assume that the mother's milk is excessively acid and carry out the instruction given in this book for that condition. It may be, however, that the trouble is due to the poor quality of the mother's milk. If that is the case there is very little that one can do if one has made certain that the diet is both generous in quantity and of a quality to allow a normal queen to produce milk of the required richness. The stomach of a young kitten is very small, and if the milk

does not satisfy hunger the kitten endeavours to increase its consumption, with unhappy consequences.

Within twenty-four hours one should be able to form an opinion as to the real cause of the trouble, and if convinced that the milk is not of satisfying quality for the kittens, the only solution is to supplement the mother's milk with some other kind of milk. Hand feeding is an exacting business, but it is well worth while if the litter appears promising. When the kittens are three weeks old they can soon be taught to feed themselves, and much of the labour disappears, but earlier one must resort to hand feeding. The best supplement to the mother's milk at this time is warmed goat's milk to which a small amount of glucose has been added. Cow's milk is easily a second best for the purpose, but may be all that is available.

If, however, pot belly in the kittens is the first sign of trouble to be noticed, every attempt must be made to remove that symptom of the disorder. Usually one can effect a speedy cure by giving each kitten two drops of liquid paraffin, and then one drop each day until the appearance is again quite normal.

Every year many litters are lost through this trouble, but most of them could be saved if remedial and preventive measures were taken in time. The breeder who is not observant, and is thereby lacking in stock sense, will always have to pay the penalty. It is not at all unusual to find kittens which are infested with worms also showing signs of pot belly. Consequently when trying to make a diagnosis this possibility must not be left out of one's calculations.

Prefixes

See Affixes.

Pregnant Queen, The

When a queen returns from mating she may have ceased " calling ", but it would be very unwise to allow her complete freedom at once. Some queens are much more violent than others at this time, and unless you know your queen sufficiently well to be sure that she is out of season, it is wiser to keep her under control for a week after she returns from the stud. Apart from this restriction she can and should lead a perfectly normal life.

Usually some weeks must elapse before one can have even the slightest idea whether the mating has been successful or not, and the novice cannot generally see signs that the queen is in kitten until about four weeks after her return. Because of this

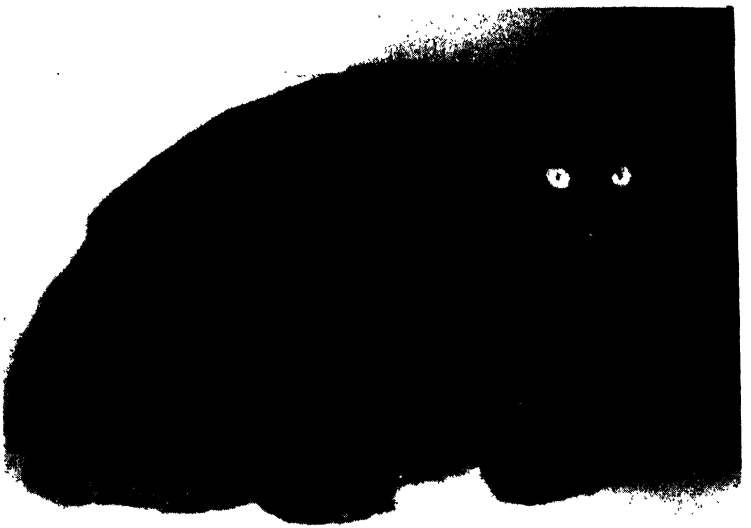


Photo : Douglas Went

BLACK
SALOME OF SPELL-LAND

it is necessary to keep a careful eye on the lady so that one notices the first signs if she starts to call again. To assume that a satisfactory mating inevitably means a litter of kittens is most unwise, and might well lead to a litter of unwanted mongrel kittens at some unexpected date.

No difference should be made in the feeding of the queen during the first few weeks of pregnancy, and she should in no way be regarded as an invalid requiring special attention. To give her additional food just because she is in kitten might make her too fat to be able to deal with the litter satisfactorily at the time of birth. During the last four weeks of pregnancy an extra meal may be given daily, but one must always remember that nourishing food is far more important than bulk. A queen who is heavily in kitten will probably be much better for the feeding of smaller quantities at more frequent intervals.

Exercise and fresh air are of the greatest importance during this period of pregnancy, and every attempt should be made to allow the queen to develop good muscular tone by encouraging her to take as much exercise as she feels she needs. The novice is inclined to attempt to restrict the queen's activities in the fear that she may injure herself or her family, but in practice such fears are practically groundless. Occasionally a pregnant

queen may have an accident and lose her litter, but generally speaking she can run and jump without any unfortunate consequences even up to the last few days before the family is born. To try to help or hamper her in her normal activity is much more likely to produce an accident than if one leaves her entirely alone. It is rarely that a queen fusses when she is in this condition, and it is foolish for the owner to try to fuss for her.

Naturally a queen becomes much less active during the last few weeks before the kittens are born. This is merely because she has become much heavier if the litter is one of reasonable size and number. She finds that her body has become more unwieldy so she spends more of her time in rest and sleep.

During the gestation period particular attention should be paid to the regularity of bowel motions. A teaspoonful of liquid paraffin given twice a week should be sufficient to ensure that there is no constipation, a disorder to which many " in kitten " cats seem subject.

At the end of the seventh week a queen will usually become somewhat restless and wander round the house. She is now drawing near to the time when the kittens will be born and she is looking for a suitable place in which to have them (*See Kittening.*)

Preparation for Show

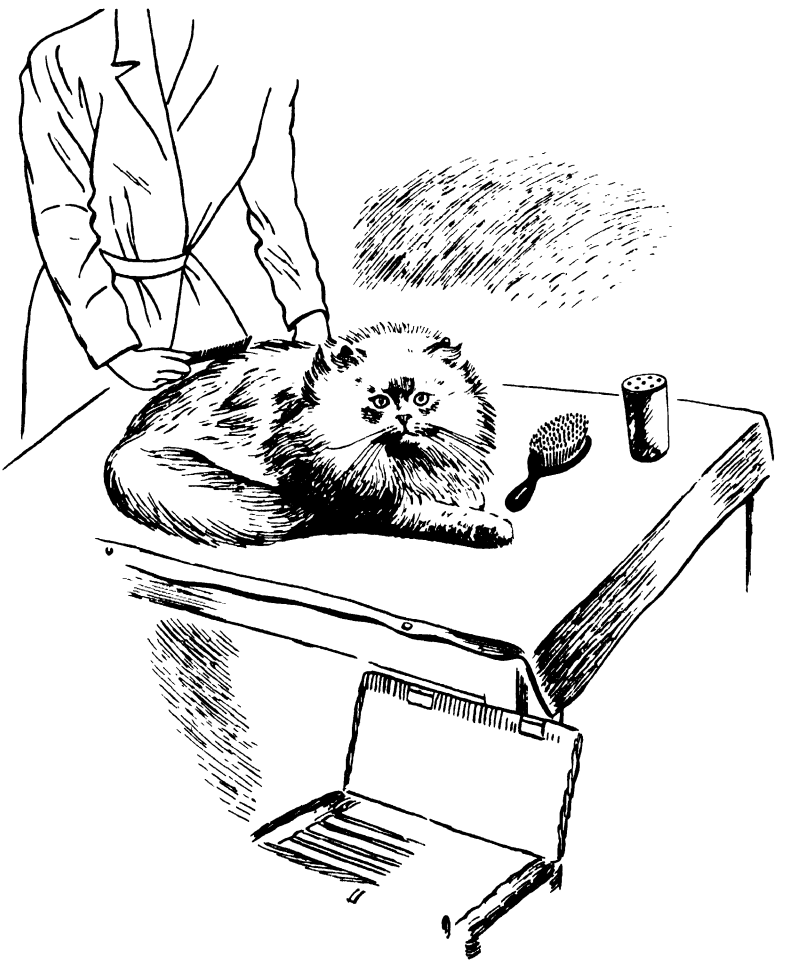
Although last-minute preparations must be made during the two or three days preceding a show, real preparation is made long before this. On the actual day the final decision between several cats may have to be made solely on condition, for apart from this factor there may be little to separate them. Now condition is something which can only be achieved over a considerable period of time, for it means far more than the appearance produced by the skilful use of powder, brush and comb.

Physical fitness produces outward signs of condition, and this, when combined with careful grooming, will make a cat look his best on the day of the show. Thus the animal must be given every opportunity to achieve physical fitness, and also an environment which will help to maintain it in that state if it is to do well in a show.

A few days before the show particular care must be paid to the coat, and if necessary a bran bath may be given. Some practical advice on this subject has been given in an earlier section. The coat may also be well powdered a day or two before a show, but it is unwise to use powder on the day of the

show in case some still remains when the judge comes to handle the exhibit. Cats have been passed by judges because a cloud of powder has given evidence of too careful preparation. No competitor can grumble at this decision, for a powdered cat is not in its natural state. If regarded logically, powder on the coat must be regarded as faking, however honest the intention of the exhibitor.

Feeding on the day before the show should not be too generous, as an accident may happen which will ruin the cat's chances



SHOW PREPARATION

of success. On the actual day of the show food should not be given until after the judging is finished. A cat which has a keen appetite, but is not excessively hungry, is far more alert and able to show its good qualities. One that has had a good meal is in no mood for showmanship, but prefers to sleep.

The animal should always be taken to the show by its owner or someone whom it knows well. To all but the exceptional cat a show is a trying business at best, and the presence of a person it knows will help to ease the nervous excitement caused by new surroundings accompanied by much bustle and noise.

When the show hall is reached the cat has to pass the vet. before it is placed in its pen. This examination is a wise precaution to prevent sick cats from passing infection to others.

It is always wise to clean the wire of the pen before introducing the cat. A piece of cloth dipped in methylated spirit will remove that surface dirt which may otherwise ruin the appearance of a light-coated cat. As with the practise pen at home, the show pen must also be carefully examined for loose wires.

Usually the animal will want to use its nose to inspect its new quarters as soon as it gets inside. After curiosity is satisfied the cat usually settles down comfortably if it has before experienced confinement in a show pen.

Nothing must be put on or into the pen which could in any way distinguish the animal from any other in the competition. A piece of plain blanket for the cat to lie upon is permissible, but ribbons and fancy cushions are strictly forbidden. After the judging is finished, exhibitors are then usually allowed to give vent to their artistic tendencies. It is the duty of the stewards to see that there is no infringement of these rules, but the considerate exhibitor remembers them himself.

Prices

As is only natural, the prices asked for cats and kittens fluctuate not only according to the quality of the animal, but also in accordance with the law of supply and demand.

There was a time when Whites were in much request because White Persians had become fashionable in literature and also on the stage. As a result of this publicity, for a time the demand for Whites far exceeded the supply, and as a consequence prices became high. On the whole, however, it is the Blue for which the biggest demand always exists. Although there are almost certainly more breeders of Blues today than of any other variety, with the possible exception of Siamese, the price of a good Blue male kitten at two months is likely to be ten guineas, and

perhaps two guineas less for a female. Before the war prices on an average would have been about half this. As far back as 1912 males sired by champions could be purchased for two guineas or even less. It is difficult to forecast the future of prices, but it is more than likely that in a few years present prices will be considered too high. Creams and Chinchillas and Whites sometimes approach the prices of Blues, but on the whole other varieties are two or three guineas cheaper.

Siamese are extremely popular, but at the present time there are so many breeders of this variety that prices are still quite reasonable. The price of a Siamese kitten may also be influenced by the knowledge that on the whole they are somewhat more difficult to rear. The fact that the Siamese Cat Club has a membership of over five hundred is an indication of the popularity of the breed. The best kittens will fetch about five guineas for females and seven for males.

If one wishes to start off with a full-grown female who may already have proved herself to be a good breeder, the price asked will be considerably higher. Today one could not expect to purchase a good, young queen who is a proved breeder for less than twenty guineas. If she were really outstanding the price might be even higher. Naturally, when discussing livestock, one must always remember the chances of ill luck as well as good, but a good queen may easily repay the greater part of her cost with her first litter. For the novice the purchase of an adult is probably the wisest and ultimately the cheapest method of starting.

The price of a stud cat depends largely on his reputation. Not many years ago, but certainly before prices were enhanced by war conditions, £100 was offered and refused for a well-known Chinchilla stud. It is impossible to give any really reliable figures for stud cats, as comparatively few good studs are sold, but £50 could not be considered dear for a young male who had already proved himself to be a good sire. Bargains are rare, but when, as sometimes happens, a breeder has to give up, he is usually more concerned about a good home for his cats than the price he is to receive. Adult cats are always difficult to find, and thus a kitten more often than not forms the nucleus for future breeding operations.

Fortunately there are few people who either expect or wish to make money out of cat breeding. It is very doubtful if anyone in this country could make a living from cats, even if that were his object. One can hope, however, from a modest outlay to enjoy a hobby which may in time pay for itself,

and at best leave a small margin on the right side. No one should expect more than that.

Pulse

As with human beings the rate of the pulse can be used as a means of assessing the state of health, so also with cats it is of value provided one actually knows what the animal has been doing immediately before the pulse is taken.

It is difficult to give any definite figure as being normal for the cat, as so much depends upon age and not a little upon the size of the animal. Generally speaking the pulse rate decreases with age and size, but for a cat in its prime a good average figure would be about 95 beats per minute.

To take the pulse one must find the femoral artery high up on the inside of the thigh in the back leg ; and if one presses gently on this artery where it passes over the thigh bone, the beats will be distinct and may be easily counted.

There are many varieties of beat and a considerable difference in rate for certain conditions, but such niceties of distinction are for the experienced medical man. The ordinary owner is merely concerned with two aspects of the pulse ; the strength of the beat and the number of beats per minute.

A rapid pulse is usually a sign of fever. The effects of the poisons formed during disease on the action of the heart alter the normal beat. In such comparatively common diseases of the cat as pneumonia and toxæmia, the pulse rate will increase rapidly. If it reaches 140 one must regard the condition as being really serious.

A slow pulse, on the other hand, is a much more serious sign, for there are few actual diseases which produce a slow pulse. Slowness is thus rather a sign of physical collapse than anything else. Even in extreme old age the rate will rarely fall below 70, and any rate lower than this is often a sign that the outcome of an illness will probably be fatal.

A full, steady pulse is a sign of physical health.

Obviously if one wishes to use the pulse rate as a check when there are other symptoms of illness, one must know the normal rate for each individual. This can only be obtained when the animal is perfectly fit.

Punishment

The punishment of a cat for misdeeds presents a very difficult problem, as no one seems to be able to understand adequately the working of the animal's mind. It is, however, obvious

that the punishment of crime by using any form of physical violence is quite useless, as the only likely result will be that the animal will merely develop fear of the person who has struck it.

Thus the discipline of the cat must be based almost entirely on a series of commandments, all of which begin with the words " You must ". As far as one can judge negative commands are assuming an intellectual capacity which the cat may not possess. Because the animal desists from doing something because you say " No " depends almost entirely on the tone and volume of voice you use.

When a cat is dirty in the house it is a crime to push its nose in its own excreta, for a cat certainly cannot associate this action with one which it performed itself perhaps some considerable time earlier. When caught in the act and scolded the animal will remain quite unperturbed unless the scolding is sufficiently loud to frighten it. The positive command " You must go to your tray " must be translated into action, a language which can be understood when the offender is put straight into its tray and kept there for some time. Several lessons of this kind will teach far better than any other method.

As far as one can judge a cat has no sense of shame. It may be, of course, that humans say there is no shame merely because they cannot recognize it in a form which is common to themselves. It is thus dangerous to be dogmatic when trying to interpret the mind of a cat. A hungry cat will always steal, as will also a well-fed cat if it feels so inclined, and they are always likely to jump on a table and take any titbit that appeals to them. Naturally if they are spoken to sharply they will jump off at once, but that is because they have learned from experience the consequences attendant upon the variations of the human voice. A cat certainly possesses memory.

Some cats are killers of birds, and one often feels that punishment should be the reward for this cruelty. It must be understood, however, that a cat has no concept of cruelty. If one were to tie a dead bird round the cat's neck as a constant reminder of its cruelty, the probability is that it would regard the corpse as a new and interesting plaything.

It is only natural for a cat living an outdoor life to become a hunter, and one knows from experience that it is always attracted by swift-moving objects, be they birds or butterflies. A cat which catches birds should never be allowed to eat or play with them. Then, after a considerable time, birds will lose their interest. It is, nevertheless, too much to expect that

swiftness of movement will lose its attraction, and old age is the only cure. It must be difficult for the cat to differentiate between the mouse which runs and may be killed and the bird which hops and has to be left severely alone.

Fortunately few cats have serious vices, and the well-trained animal who is taught what it may do rarely deserves any form of punishment. Cats are essentially creatures of habit, and the owner must see that good habits are acquired.

If we are ever able to understand the mind of the cat it may be possible to formulate a penal code for the cat kingdom, but at present it would be far safer to hold an inquest on our methods of management if our cats are badly behaved.

Pyorrhœa

See Teething.

Q

Quarantine

Every cattery in which there are a number of cats, some of them studs at public service, and others which are exhibition animals sent from time to time to shows, must have quarters in which individuals may be kept in quarantine. Such quarters should be well apart from the ordinary buildings, and if possible the person looking after them should not also look after the normal residents.

There are several diseases which can sweep through a cattery to produce a very high death roll, and obviously such infections must be avoided at all costs.

When cats are not sent away to shows, and when visiting queens are not received, the danger of serious diseases reaching the inmates is greatly diminished, but it is certainly in the best interests of the Fancy that shows should be held, and also that the best males should be available for queens other than the breeder's own stock. Since the facts are such, precautions must be taken.

When a cat returns from a show it should be placed in quarantine for a period of ten days before being returned to its normal quarters. Influenza and infectious enteritis will both develop before the end of this period if the animal has been infected with the disease while at the show. The unwise owner who makes no provision for quarantine will sooner or later introduce one of these serious complaints into his cattery with disastrous results. With infectious enteritis mortality may reach 80 per cent of all animals which develop the disease, while the death rate with influenza, although considerably less, may nevertheless reach serious proportions.

A popular stud cat may receive thirty queens during the season and each one of these is a potential carrier of disease. If, however, the male is kept as he should be in separate quarters, and the queens who come to him are carefully inspected on arrival, the risk is lessened. To allow visiting females to meet the brood queens and kittens which belong to the place is asking for trouble, and serious trouble at that.

Disinfecting should also be carried out with the greatest care where strange cats have been, and if the same attendant must tend all the animals on the premises, the most careful precautions should be taken. Hands and clothes are always media whereby infection may be carried, and one must never forget that shoes are equally dangerous.

When there is infection in a cattery the whole establishment must be considered to be in quarantine as far as all outside cats are concerned. To be on the safe side no fresh animals should be introduced into the cattery for three months after influenza, and the period should be extended to six months in the case of infectious enteritis. Obviously no cats should be sold from such premises until there remains not the slightest risk of their carrying the infection with them.

The precautions suggested may seem irksome, but if carried out much serious illness will be prevented and epidemics will be rare.

R

Rail Travel

When sending cats by rail it is of the utmost importance to make such arrangements as will ensure that the animal is as little disturbed by the journey as possible. If this object is to be achieved the journey must be carefully planned with the aid of a timetable, especially when the route taken entails a number of changes.

When a cat has to travel across London from one terminus to another, several hours can be saved if one first ascertains the times during the day when the vans leave the various stations for transfer to other lines. If it can be arranged that the cat arrives within half an hour of the time for the departure of the van, there is every prospect that the animal will spend only a short time waiting for transit. Such times can always be obtained if a 'phone enquiry is put through to the London station.

Wherever possible, of course, it is a great help if one can put the cat on the train at a station which will permit of a journey without changes. The trouble is well worth while, but obviously such methods are not always practicable.

The sender of an animal should always pay a higher value charge which will ensure that some railway employee is at all times responsible for the animal while it is on the journey. A charge as low as threepence will insure the animal for thirty shillings, which is probably far below its value, but this extra charge will at the same time remove the danger of the box or basket being left for any length of time on a cold and draughty platform. When there is always someone responsible for an animal on which higher value has been paid, it is unlikely to be mislaid and thus delayed. If one so desires, one can pay an extra charge sufficient to cover the owner against complete loss, but with livestock this possibility is always remote.

The person to whom the animal is sent should always be informed, either by 'phone or telegram, of the time of departure, as when this is done the approximate time of arrival can be estimated within certain limits. If the box has been labelled

T.C.F., which means "To Be Called For", the station clerk at the destination will usually inform the person expecting the cat as soon as it arrives. Otherwise the box may remain at the station for a considerable time before the railway agent is able to deliver it.

It must be most unpleasant to be confined in a comparatively small box or basket for many hours, and the more one can do to reduce this time to a minimum the better for the cat.

Red Persians

This is a breed which has very few followers, and if one wished to make a start with the variety, the obtaining of breeding stock would be most difficult.

A cat of the deep, rich red which the Standard demands would be most attractive, and both fame and success await the breeder who can produce a Red Self of outstanding quality.

No great help can be given, however, as to the method by which good Reds might be produced, but one warning is essential. The use of the Red Tabby is not to be recommended, for it is far easier to breed in markings than it is to breed them out again.

Red Selfs may still exist, but the number must be very small indeed.

OFFICIAL STANDARD

Colour : Deep, rich red, without markings.

Coat : Long, dense and silky, tail short and flowing.

Body : Cobby and solid, short thick legs.

Head : Broad and round, small ears well set and well tufted, short, broad nose, full round cheeks.

Eyes : Large and round, deep copper colour.

SCALE OF POINTS

Coat	50
Body	15
Head	20
Eyes	15
	100

Red Tabby Persians

Although Red Tabbies cannot compare with several other breeds for popularity, they have always had a considerable

number of faithful supporters, and today there are at least seven studs placed at public service.

The Red Tabby is a very difficult variety to breed, for its colouring is such that the distinctness of markings is partly concealed by the richness of the ground colour. As with all varieties of long-haired Tabbies, the length of coat also tends to make the markings indistinct.

A solid red back must be avoided, yet in the years before the war this was a fault which was far too frequently observed. It is only by careful selection of breeding stock that faults of this type can be eliminated. Tabby kittens show their markings clearly within a very short time of birth, and if pencillings and bars are missing at this time it is most unlikely that they will appear later.



Photo: T. H. Everitt

RED TABBY
CH. RED LEADER

Another common fault of the Red Tabby is a white tip to the tail. This must be regarded as a definite blemish, and can only be eradicated by careful breeding. If an animal with a white tip is bred from, one can be quite sure that this same fault will appear sooner or later in the descendants.

When considering type it is as well to forget Blues, Blacks and Creams, for few Red Tabbies approach this type. Great progress has been made in shortening the face in Red Tabbies, and width of skull has been much improved, yet even now the

best Reds are far behind the finest Blues. It would be most unwise to assume that this will always be the case, for great changes can be brought about as a result of intelligent experimental breeding.

Eye colour in Red Tabbies has been carefully bred for, and many examples of real orange eyes can now be found. One may safely say, however, that there is still room for considerable improvement.

Ears too have not yet been reduced sufficiently in size, and it is very rarely that one finds ears with rounded ends which make them appear smaller than they are.

Various crosses have been suggested for the improvement of Red Tabbies, but probably the most profitable experiment would be to mate a Red Tabby queen to a Black male of outstanding quality. If several breeders would undertake this experiment, and then use the cross-bred males to unrelated cross-bred females, great progress might be made. If, however, the cross-bred females were mated back to a Red Tabby male, any gain in type might well be lost.

A section on Red Tabbies cannot be concluded without making mention of at least one breeder who has given many years of service to this variety. After many years in the Fancy Mrs. Campbell Fraser is still a keen breeder of Red Tabbies, and only recently her young male, Hendon Sir Roderic, won a Championship Certificate at the Nottingham Championship Show.

OFFICIAL STANDARD

Colour and Markings : Deep, rich red colour, markings to be clearly and boldly defined, continuing on down the chest, legs and tail.

Coat : Long, dense and silky, tail short and flowing ; no white tip.

Body : Cobby and solid, short thick legs.

Head : Broad and round, small ears, well set and well tufted, short broad nose, full round cheeks.

Eyes : Large and round, deep copper colour.

SCALE OF POINTS

Coat	50
Body	15
Head	20
Eyes	15
	100

Registration and Transfer

No cat may be exhibited at any show held under the rules of the Governing Council of the Cat Fancy unless it has been registered in the name of the owner with the Secretary of the Council.

It is usual for the breeder to register kittens before they are sold. On the form provided for registrations considerable detail has to be given as to the ancestry of the kitten. This information is of great value in checking pedigrees at some later date, and it is also a safeguard against fraud. Once a kitten has been registered under a particular name, that name can never be changed during the cat's lifetime.

Most breeders, if they intend to remain in the Fancy, adopt a prefix by which all their cats can be recognized. If the prefix adopted is " Charming ", then the name of each kitten will be preceded by the word " Charming ".

The charge for registering the name of each cat or kitten is two shillings, but litters of three or more kittens may be registered at one and sixpence each, provided that this is done before they are six weeks old.

The registration forms are kept by the Secretary of the Council, while the owner receives a certificate for each kitten that has been accepted for registration. It is usual to hand on this certificate to the purchaser when the kitten is sold, because it is not only proof of registration but also a confirmation of pedigree. The certificate also bears the animal's registered number in the records of the Council.

A supply of forms and information as to the conditions for registration can be obtained from the Secretary of the Governing Council—F. H. Thompson, 130, Wickham Way, Beckenham, Kent.

When a registered cat is sold notice of the transfer of ownership must also be given to the Secretary on an official form. If this is not done the right of ownership is not recognized by the Council if the animal is to be exhibited at some later date. A cat may only be shown in the name of its owner, and in this case the owner is the person who registered the animal or to whom ownership has been subsequently transferred.

Transfer forms are very similar to those for registration except that the former must bear the signature of the person from whom the purchase was made, provided that he is the recognized owner in the Council's records. The cost of transfer is two shillings.

It is definitely an advantage for all pedigree cats to be registered. It will be most helpful thus to have records for the use of future generations of fanciers who will be able to trace back the family history of their cats.

Research and Vivisection

This section is introduced because there are so many people who confuse the two terms. One has only to write an article in which research is mentioned with reference to cats for the result to be immediate and unpleasant. The letters which are received are conclusive proof that the indignant writers are convinced that there has been cruelty. The two terms, however, are by no means synonymous.

Vivisection deals with operations by the use of the knife, or perhaps the use of a hypodermic syringe, to produce specific diseases in living animals. Such operations may cause pain and even death to the animal used for the experiment. At best the animal obviously cannot appreciate the scientific purpose for which it is being used.

Whether vivisection is right or wrong is entirely a matter of individual opinion. There are clearly two sides to the question which cannot be weighed entirely by sentiment. Vivisection of animals has helped to provide valuable information for the alleviation of suffering, and even the saving of life, for human beings, but against this must be placed the fact that many animals have had to endure much pain.

Research, however, does not carry any implication of suffering. If a breeder decides to experiment in an attempt to find out how cats should be mated to produce certain colours, and these experiments are carried out in a scientific manner—that is certainly research. The search for any scientific facts about breeding may be research, but there need be no hint of vivisection in such investigations.

Perhaps vivisection should be forbidden, but no one would suggest that research should not be carried out to add to our knowledge of cat breeding and general management.

Rickets

Although rickets is not a common disease among cats, it must be borne in mind that all young animals will develop this trouble if their management during the first few months of life is unsatisfactory in certain ways.

Usually the malady has been present for a considerable time before there are any obvious signs of bone deformity; in fact,

bone deformity cannot appear in the first few weeks. Sometimes the symptoms are so simple that they escape notice, or are attributed to causes which seem acceptable although they are actually far from the truth. A kitten which frequently hurts itself when jumping should be regarded with suspicion. One may explain the consequent lameness by saying that it has jumped awkwardly and strained a muscle, and then when the same thing happens on several occasions one is inclined to regard the first strain as being the predisposing cause for all the others. It would be much wiser to regard the first accident as being a sign that development of bone was not normal, and to treat for rickets as a precaution.

A kitten which easily gets tired should also be suspect, particularly if one notices that there is a certain ungainliness of movement as if the kitten felt that its own body was rather too unwieldy to manage. Such animals often appear to be all bone, and have a scragginess of neck and shoulders which makes them also appear unthrifty.

The cause of the complaint is apparently that the animal is unable to make use of the mineral salts which are in a good, balanced diet. Phosphorus and calcium are both intimately connected with sound bone formation, and during the process of digestion these substances must be extracted from the food if rickets is to be avoided. One may know, however, that both these substances are present in the food, and yet the animal may develop rickets. The solution to this difficulty is the provision of Vitamin D, which is best provided in the form of Halibut Liver Oil at the rate of three drops each day, but at first give one drop at each of three meals. In very bad cases the dose can be increased to six drops each day for a period of from two to three weeks, but should not be continued beyond this period. An excess of Vitamin D may produce definite digestive disturbances.

There are a number of substances on the market with proprietary names which contain Vitamin D as well as a number of mineral salts, and these may be found very useful, but for the average case good food, plenty of fresh air and exercise, and a daily ration of Vitamin D will provide both a preventive and also a cure if that is necessary.

If rickets is noticed in its early stages and suitable remedies are immediately applied, there is no reason why the adult cat should show any obvious signs of the weakness of its childhood, but if real deformity is allowed to develop, this will never completely disappear from the adult frame.

Ringworm

Ringworm is not a common disease of the town cat, but is much more common with those kept in the country. The animal most commonly affected is the cow and next to that the horse. Yet it must be accepted as a fact that any cat may develop the disease, for both rats and mice can be a source of infection.

Hay or straw which has come in contact with cattle or mice suffering from the disease is a means whereby infection may be brought into the cattery. In the past both of these materials were much more commonly used for bedding for cats than is the case today, with the very probable result that the number of cases of ringworm among cats has diminished.

Dogs apparently are more susceptible than cats, and consequently where both are kept together the risk of the cat is greater than where no dogs are kept.

One of the main difficulties with this disease is that it is extremely contagious not only to animals but also to human beings. Thus an infected cat must be completely isolated, and the person whose task it is to treat the animal must take extreme precautions to see that the disease is not carried to other members of the cattery on either clothes or hands. Perhaps it is even more important still to make sure that he himself does not contract the complaint. There is also the further complication that a cat which is suffering from the disease may also re-infect itself if the bedding is not frequently removed and burned.

With cats treatment is difficult, as the normal remedies cannot be used on the cat's skin. There are two reasons for this. The skin is extremely sensitive, and the application of many substances would set up a local irritation which would cause the animal to scratch violently. In this way there would be considerable danger of the disease being spread even further over the body. The raw places would have to heal before further treatment could be applied. A cat's skin also absorbs quickly ointments which are placed upon it. Furthermore, the habitual licking of a cat will cause it to swallow some of the mixture which, if poisonous, may have the most serious consequences.

Ringworm is caused by a fungus, but it is now recognized that there are several types of the disease each caused by a different fungus.

The more common type found in the cat is called grey ringworm from the appearance of the very light scales which appear

on the surface of the skin. In this case the fungus travels down the hairs and passes under the skin into the hair roots, and from there it spreads until a circular area is affected. The hair soon loses its vitality and becomes brittle, and then finally breaks off close to the skin. Thus it is that one usually first notices the disease because of one or more circular patches of greyish-white skin from which the hair has apparently disappeared. The bare patch, which is at first very small, gradually increases in size if no attention is given. There is always a danger that the disease will be carried to other parts of the body from the animal's habit of scratching and licking.

The other type rarely found in cats is honeycomb ringworm, so called from the appearance of the yellow scabs with hollow centres which appear at the affected spots. Probably this form of the disease is only contracted from mice who are subject to it. In the cat the part first showing signs of the disease is the foot, where, unfortunately, it is most difficult to see until it has become firmly established. In the act of washing the cat will transfer the trouble to the head and face, and it is not uncommon with this complaint for the eyelids to become affected.

As has already been said, treatment in both cases is very difficult, and in early diagnosis lies the best hope of a speedy cure. All scabs and affected hair should be carefully removed by dressing the part with some warm antiseptic solution. Any hair and scabs removed in this way must be collected and burned, and one must be at great pains to see that the treatment itself does not spread the infection to the surrounding hair. Thus an orange stick with a small piece of cotton wool round the tip is a useful instrument. It is always wise to clip the hair away round the bare patch before starting the cure. If one can first kill the fungus round the circumference of the bare patch, the risk of such patches growing larger is diminished.

Iodine will certainly cure ringworm, but it is dangerous to use, although one may be forced to resort to it. When this is done the tincture should be diluted with an equal quantity of water, and not more than one spot should be treated on any one day. Ointments containing iodine are also useful, but must be used with caution.

There are on the market several proprietary articles which it is claimed will cure the disease, but before using them it would be wise to ask the makers what risk is entailed. From the very nature of the cures which one dare use progress is bound to be slow, and several months may elapse before the trouble is over.

Kittens sometimes develop ringworm when they are only a few weeks old. In this case the mother is always the source of infection, and she must be carefully examined if it is not realized that she is suffering from the disease.

S

Sanitary Tray

By nature cats are clean creatures, and when allowed complete freedom can safely be left to look after their own sanitary arrangements. When, however, they spend most of their time confined to the house or cattery a sanitary tray must be prepared for them.

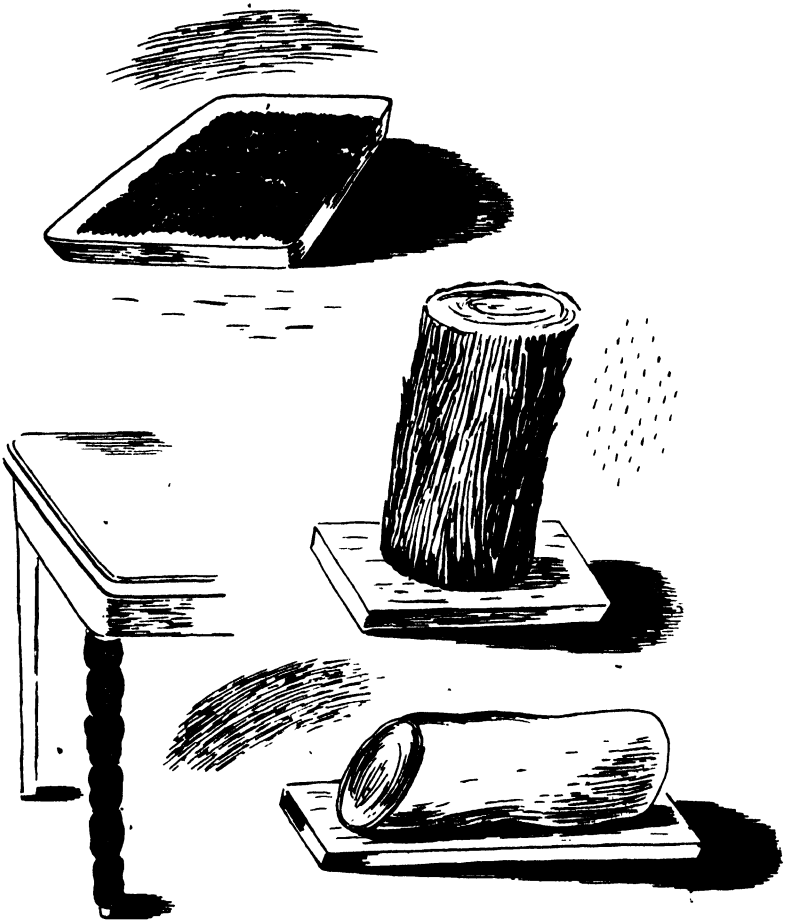
When one meets cats which show few signs of house training, their bad habits can usually be placed to the responsibility of the person who reared them.

The mother cat soon shows her kittens how to use a sanitary tray when they leave the nest box and start to run round the room. She, however, can only do her part satisfactorily if she is given the intelligent help of her owner. A shallow tray must be provided with some absorbent material placed in the bottom. A shallow tray is necessary because the kittens will start to use it before they are very nimble on their feet, and they are not easily able to clamber into a normal tray. The mother then shows her babies where to go and she makes quite sure that they are obedient. Sometimes when a kitten is about to disgrace itself the queen will push it with her head until it is firmly planted in the tray, or she may pick it up in her mouth and carry it there. Such is instinct!

Cats are creatures of habit, and once the habit of cleanliness in the house has been formed it is very difficult to break. There are some which are so particular in this respect that they will suffer considerable discomfort rather than be unclean, although their distress is occasioned solely by the carelessness of the owner.

Bearing in mind the habit side of the problem, one must always put the tray in the same place, and to this spot the cat will go. Occasionally a thoughtless owner puts the tray in so many different places that the cat gets confused and there is an accident. It seems likely that the cat looks for a place rather than a tray, and when it has found its accustomed spot, but no tray, does not realize the necessity for further search.

Trays must be cleaned regularly, for no self-respecting cat



SANITARY TRAY AND SCRATCHING LOGS

will use a filthy tray. Cleaning is but a matter of a few moments, and whenever possible should be dealt with twice a day. At least once a day the contents should be removed and the tray thoroughly washed with disinfectant.

The most satisfactory tray to use is an enamelled one, and although this may be more expensive in initial cost, it will last considerably longer than one of ordinary metal. The urine of a cat is usually acid and will very soon eat away the very thin coating of tin. When this happens the metal of the tray rusts and it is impossibie to clean it satisfactorily, with the result

that it develops an unpleasant smell which no disinfectant will remove. If a metal tray is the best that one can buy it should be renewed as soon as it becomes unpleasant.

There is no material for putting in the tray which has only good qualities and no bad ones, with the result that breeders use different substances according to their personal preference. Ideally one needs something which is very absorbent and yet not too expensive to use. Some people line the trays with a number of thicknesses of newspaper which is renewed as often as necessary during the day. This has little to recommend it apart from cheapness.

Sawdust is quite absorbent, but if one uses it there is a slight danger of the cat becoming upset internally. In the process of " covering up " the animal gets some of the sawdust in its fur and then later, when licking itself, swallows the sawdust. A diet of wood even in small quantities is not to be recommended. Wood shavings would remove this danger, but they, on the other hand, are not very absorbent. The greatest disadvantage in using sawdust is that it always seems to get widely scattered over the floor where, by reason of its light colour, it is easily noticed.

Dried earth is an excellent material, but is not easily obtained by some town dwellers and especially those who live in flats. In this climate of ours dry earth is also difficult to obtain unless a store is laid in during fine weather.

For most people granulated peat moss is the best substance to use. It can be bought either in 2-cwt. bales, in which case it has to be broken up, or already granulated in sacks. It is extremely absorbent and is also something of a deodorant. It is more expensive than some other materials which have been mentioned, but should not cost more than a few pence each week. With peat moss there is also the additional advantage that it can be dug into the garden, where it will have a definitely beneficial effect. Sawdust and shavings and newspaper would have to be burned. That is not always easy in summer time.

In cat keeping the earth box or sanitary tray is an item of considerable importance, for few pedigree cats are given that liberty which enables them to deal with their own private affairs. Thus it is a matter which should receive careful attention so that the animals themselves may feel at ease and cannot become a nuisance to humans. A dirty cat is a very likely source of domestic friction.

Scalds

See Burns.

Scratching Log

Kittens and cats can be most destructive, and it is usually with their claws that they do most damage. The animal generally finds some article into which it can stick its claws, and then it scratches with both feet so ecstatically that cloth or leather or even wood is damaged beyond repair within a few minutes.

One usually says that the cat is " sharpening its claws ", but it is very doubtful whether this is what is actually happening. There is little opportunity for the tips of the claws to become blunted, for they are rarely exposed. When a cat walks its claws are withdrawn and do not come in contact with the ground. It is much more likely that this is merely an original cleaning process which has now become instinctive. In its wild state the cat had to tear its food from the carcase by the use of teeth and claws, and afterwards the claws would certainly need cleaning. On the other hand, as the claws are retractile and controlled by muscles, it may also be that this is only exercise of those muscles to strengthen them. Whatever the true explanation of the act, the fact remains that this process may spell ruin to good furniture.

Now a cat is no respecter of valuable furniture, in fact it has no idea of what should be left alone and what may be scratched unless it has been trained. Training, however, is not difficult.

To be able adequately to supply the animal's need, it is necessary to observe the process of " sharpening the claws ". The cat usually stretches the front legs as far forward as possible before beginning to scratch, so the article provided must allow for this. An ordinary log with the bark left on is excellent for the purpose, and if stood upright and fixed to a stout wooden base, can be placed in the room which the cat uses. There is no need for such a scratching log to be an eyesore. In America such logs can be purchased in pet shops, but the American article is often more elaborate than is really necessary, and thus in consequence more expensive. The American scratching log is usually covered with stout cloth, and between the wood and the cover there is a lining of dried catmint. This plant is most attractive to cats, and a log thus treated is certain to be an object of interest. It is not absolutely essential that such logs should be stood upright, but if placed on its side it must be of sufficient diameter to allow the cat to stand on it comfortably, and long enough to enable the animal to stretch full length.

An alternative to the log is the bound leg of a table. Hessian can be tightly wound round the leg and securely bound with

string. This may not be as elegant a solution of the problem, but it is certainly serviceable, and the kitchen table could be so adorned.

Naturally the cat must be trained to use what is thus provided, and this is no difficult task. Whenever the animal starts to use its claws on a forbidden object, it must be taken to the log and there shown how to scratch the bark or covering. Young cats are quite easily taught, and after a few lessons will go in search of the log if it is not too far away. An older cat who has never been checked requires considerably more training, but patience will usually be rewarded.

It is quite useless to scold or strike a cat, for it is not able to understand a discipline of " don'ts ". The cat can be taught to do things, but negative commands are outside its power of understanding. One may possibly be able to make the animal understand that one particular piece of furniture may not be approached, but that idea is specific and is not carried over to similar articles.

Some cats may understand the mind of man, but few men take the trouble to try to understand the mind of a cat.

All cats will " sharpen their claws ", and no one can stop them. It is, therefore, only sound common sense to endeavour to meet the animal's need in as rational a manner as possible.

Scurf

See Dandruff.

Season (Œstrum), Signs of

It is most important that the breeder should be able to recognize the signs which indicate that his females are coming into season, for when this skill is acquired the queens may be allowed a much greater measure of freedom than would otherwise be possible.

Although one can describe in general terms the signs which the average cat shows just before she starts " to call ", it must be realized that few cats are average, and in the matter of their sexual life most of them are definitely individualists. Few breeders, however, possess so many queens that it is impossible to recognize the particular traits of individuals.

One of the earliest signs shown by most cats is negative in character. There seems to be a definite change in the animal's temperament, and when this happens it is an indication that one should watch the particular queen closely during the succeeding twenty-four hours. A queen who usually gets on well with her feline companions may become less sociable and avoid

their companionship. Normally she may take little notice of any humans other than the one she regards as her owner, and then quite unexpectedly she will take an interest in all the humans of the household, even to jumping up and resting on an unaccustomed knee. Some queens become particularly affectionate and "fussy" a few days before they begin to call.

Restlessness is quite a common sign of the coming œstrum, and the queen will only settle in one place for a few minutes at a time. She will wander from room to room and spend much time looking out of the window with considerable interest, even if she shows no actual desire to go outdoors.

When several of these unusual signs are shown at the same time it is only wise to take precautions and to keep the animal safely confined for a day or two. By the end of that time the situation should be beyond doubt.

When calling actually starts the signs are clear and unmistakable. The queen will, in fact, "call", and it is really remarkable how far her voice seems to carry, for, within a few hours, all the gentlemen, eligible and otherwise, from the neighbourhood will be in attendance to add their cries. Long-haired cats are often quite attractive when uttering their plaintive cries at this time, but Siamese are entirely different, and give vent to full-throated, piercing cries which savour of frustration and desperation. It is not at all uncommon for a Siamese queen to call so loudly that after two or three days she has completely lost her voice.

At such times all cats are extremely restless and prowl backwards and forwards without intermission, and even at night this same agitated pacing continues until, almost exhausted, the animal at last decides to sleep. When this stage has been reached the utmost care must be taken to see that the queen does not escape, for if she does mating is almost certain.

When in full season the queen rubs her head against any furniture she can reach, and from time to time lies down and rolls violently from side to side. When the rolling stage has been reached the time has come for the female to be sent to the stud. It is a great mistake to send her away too soon, for the upset occasioned by the journey in an enclosed box may put her off calling. When in season cats are extremely temperamental.

Some cats, when calling, stamp violently with their back legs, but this is not characteristic of all, and never happens until there are other signs to show the cause for these antics.

If one is on very friendly terms with a queen, she seems to be

much affected by a human voice she knows well, and if spoken to, in fact, whenever she is addressed by name, she will reply. With some cats this is the very first sign of the coming season.

Selective Breeding

Selective breeding is a recognized method of improving a particular variety, and with some varieties it is the only method that can safely be employed.

The main object of the breeder of any livestock is to do what he can to ensure that the animals he produces are, if possible, better than their parents. It should also be his policy to reject for future breeding those specimens which seem unlikely to help towards this improved standard. It would thus seem that careful selection practised over a number of generations should show a marked improvement in the qualities he is seeking to improve. Unfortunately this is rarely the case, as after a few generations in which the improvements have been quite obvious, the following generation may mark no progress at all, or there may even be signs of retrogression.

Taking as an example body size and strength of bone, one can explain what may happen.

In a group of males one may find a specimen which is of outstanding size, and which is considerably better in this respect than any of his brothers. It is only natural to select this male for stud work. When his progeny arrive, however, they may be just of average size and show no signs of their sire's qualities. When such results occur, we must consider the possibilities. Perhaps it was environmental conditions which produced the outstanding male. He may have obtained more than his fair share of the food and this happened to be of a kind which suited him better than his brothers. Thus the improvement was merely accidental. For there to be any real hope of such qualities being handed down to descendants, it must be because the genotype of the male is different from the normal. This means, of course, that the inherited genes are such that they predispose towards greater size of body and strength of bone. There is still one further requirement and that is that the male must also be prepotent for these qualities. Thus the main difficulty that the breeder soon finds is the fact that he cannot judge of the possibilities of his matings from the appearance of the parents, but must wait to see from the children whether he has chosen the correct pair for progress.

This illustration has been provided by consideration of body size, but colour of eye, length of coat, smallness of ears, in fact

all those qualities which are required in the ideal specimen, could have been used equally well as illustrations.

When we are dealing with a variety such as Blues, it can be seen that progress must be very slow and not always in the right direction. It is only after prolonged search and continuous experiment that we are able to locate those few individuals whose genotype is such that they can produce improvement in certain desired qualities. Very rarely are we fortunate enough to isolate for breeding purposes an individual whose genotype is different and valuable for a group of characters.

It is because selective breeding is such a slow method of making improvements that the breeder is often compelled to cross two different varieties. Here, of course, selection must again play its part if any advantage is to be gained from such a cross.

Even this brief account of only one aspect of breeding policy is sufficient to show that skill of a high order is needed if a breeder is to produce a sequence of outstanding animals. Such skill can only result from long experience.

Selling Cats and Kittens

The cat breeder will from time to time have kittens for sale and will need to find a market for them. It has to be remembered that in normal times it is only the well-known breeders whose kittens are booked before they are born, for with cats, as with soaps, it is often the name which sells the article. Well-known breeders are people who have had considerable experience and have proved their worth as breeders by successes on the show bench, and also from the fact that people who have bought their stock in the past have been well satisfied with it. The beginner cannot have a reputation in the cat world, and consequently he must bring his stock to the notice of prospective purchasers in a variety of ways. However good the stock may be it will not always be easy to sell in the early days. A satisfied purchaser will, however, be the best agent for making further sales.

Breeders both big and small must have a very strict moral code from which they will not break, however tempting the financial side of the transaction may be. Confidence in breeders is essential if the Fancy is to flourish.

One rule should be observed at all times, and that is never to sell a kitten which one would not be prepared to purchase oneself unless the purchaser has been told of any physical weaknesses and the price asked has been in conformity with the quality of the kitten. These remarks refer principally to stamina and minor deformities rather than show qualities, but an equal



CHINCHILLA

CH. LANGHERNE WINSOME

honesty is necessary when selling a kitten which is advertised as a "show specimen". Many breeders may consider these remarks unnecessary, as they would be if there were no black sheep in the Cat Fancy, but all livestock fancies contain their small quota of undesirable breeders. In most cases, however, it is lack of knowledge rather than dishonesty which leads to unsatisfactory dealing. A novice would always be well advised to get an expert to see the litter before it is advertised for sale, and thus obtain an idea of the quality of the stock and a fair price to ask.

The secretary of the breed club is a useful person when stock is for sale, and if he is informed of litters he will be able to give addresses to the many likely purchasers who will from time to time send enquiries to him.

Naturally one will also advertise in one or more of the periodicals which devote space to cats. The cost is only a matter of a few shillings and will bring stock to the notice of many fanciers. One or two of the important daily papers have, several times each week, a livestock column in their advertisements, and by making use of this a very wide public is reached. The cost, however, is rather high and is not worth while unless the value of the stock to be sold is considerable.

It is to be hoped that breeders will not sell stock to anyone who seems unfit to be a cat owner, for selling any animal imposes a moral obligation on the seller to make sure that the conditions under which the animal is to be kept are satisfactory. It is not always possible to see for oneself the type of home the animal is likely to have, but one can usually learn much from a letter, and the purchaser should not resent reasonable enquiries. A breeder cannot lose all interest in a litter as soon as it has reached a saleable age.

Finally, the purchaser should receive as much help as possible to make sure that the kitten will settle down satisfactorily. The less the changes experienced from one home to another, the more easily the animal gets used to its new surroundings. If it can be arranged, see that its new bed is as like its old one as possible, and always make sure that for a time at least there is little or no change in diet. The sending of a diet sheet is little trouble and will certainly help.

Older cats usually settle quite happily in new homes, although they may not quickly get on friendly terms with any other cats which are already established there. One should, however, always make sure that the animal is not to experience conditions that will make it unhappy. This would be the case if a cat

used to complete freedom were compelled to live a life of confinement.

Those people who really appreciate cats will quickly realize their responsibilities when selling stock, and will do their utmost to ensure the happiness of the animal sold. Those who are not prepared to consider the welfare of their stock should not be breeders.

Sex Control

Most breeders, if they had any choice in the matter, would prefer to have a majority of male kittens in their litters, as, generally speaking, it is easier to sell males than females. The large majority of people who buy cats want them as pets and not for breeding purposes, and until recently it has only been males that have been neutered. Thus, a male kitten purchased at two months, and neutered before it was six months, became an ideal pet. Recently females have been neutered, but this, as opposed to the simple operation in the case of the male, is definitely a major operation with all its consequent risks. For this reason it will probably never become as common an expedient to prevent breeding.

Thus, from time to time breeders have sought to control the sex of kittens, and various theories have been suggested which, if put into practice, would be reasonably sure to produce a preponderance of males.

Apparently there are three main theories.

The first says that if a queen is mated early in her period of œstrum, females will predominate in the litter, but if mating is deferred until the œstrum is almost finished, there will be more males than females.

The second theory implies that food has a definite influence on the sex of the offspring. Thus, if a queen is undernourished during her period of pregnancy, there is a strong possibility that there will be more males than females. This naturally assumes that sex can be decided some time after fertilization has taken place.

The third theory takes into consideration the condition of the stud at the time of mating. If he has been used for many queens, he is more likely to sire more males than females, but if he mates after a period of rest, then females will predominate.

Unfortunately none of these theories can be proved by scientific fact, for they are all definite contradictions of what is now known of the mechanics and chemistry of sex.

There is a certain chromosome (see section on Genetics) which contains the genes controlling sex in the individual. This is

known as the X chromosome. These chromosomes occur in pairs, and in the male cat, combined with the X chromosome, is another called Y which apparently has no influence upon sex characteristics at all as far as is known at present. The female, on the other hand, possesses two X chromosomes which are paired.

Fertilization depends upon the meeting of the male sperm with the female ova. Now half the sperms will have an X chromosome and half Y, while each female ova must obviously receive an X chromosome as there are no Ys to be distributed.

At the time of mating the male semen will contain millions of sperms, only one of which is needed to fertilize each separate ovum. The female only produces a comparatively small number of ova, some of which are fertilized and develop into kittens, while others are not fertilized at all and eventually pass out of the body.

In practice one usually finds that the males and females are about equal in number. Just because a litter turns up in which there are far more of one sex than another is no argument against this theory. Such statements are only valid when a large number of litters is considered. It is rather like tossing a penny ; one may get a run of heads or a run of tails, but if one continues the game for more than a hundred throws, the heads and tails will be about equal.

It is, of course, possible that further knowledge on the subject of sex will come as a result of research, and it would be unwise to say that sex can never be determined. At present, however, there is no remedy to prevent the birth of unwanted females.

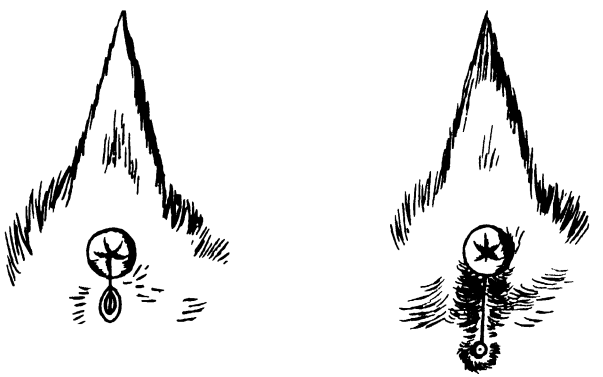
Sexing of Kittens, The

The ability to be able to sex kittens as soon as they are born is a valuable accomplishment, for in normal times far more female kittens are born than are needed for breeding purposes. As few people require females as pets, these kittens are difficult to sell. Any kittens which one does not wish to rear should be killed immediately, and it will thus usually be females which are discarded.

In the years between the wars there were several periods when it was extremely difficult to find a market for female kittens, and consequently in accordance with the law of supply and demand the price fell to a level which would allow almost anyone to purchase a young female cat with a good pedigree. This was unfortunate, because the majority of the human kind are inclined to value an article in proportion to the price that has

to be paid for it. Consequently many well-bred cats were sold as attractive and interesting kittens, and of these quite a number were neglected as soon as their playfulness grew less with increasing age. Their coats were neglected, and they were forced to fend for themselves. Quite a number of them would have been far better dead.

Now, although at present there seems to be a market for any kitten, whether male or female, and people are prepared to pay a good price for what they buy, these conditions may not obtain for very long. There is then a definite moral obligation upon breeders of cats to make sure that the kittens they sell go to homes where circumstances are favourable for a happy and well-cared-for life. Thus when the market again becomes flooded with kittens, as may well happen, all females which are not likely to be sold should be painlessly killed at birth.



SEXING KITTENS
Left: FEMALE *Right:* MALE

Distinguishing the sex of a kitten as soon as it is born is a knack that can be easily acquired, but one must not expect a hundred per cent accuracy, for even the oldest of breeders in experience make mistakes from time to time. The greatest difficulty occurs when all the litter is of the same sex. This, however, is a comparatively rare occurrence. When the kittens vary in size, as is often the case, the selection is again made difficult.

One must inspect the kittens in the space which is under the

tail, and compare the distance between the anus and the entrance to the vagina in the case of the female, and with the male the space between the anus and the sheath of the penis. If two kittens, one male and the other female, are roughly of the same size, it will be noticed that this distance is greater in the case of the male. At this early age one is dealing with small areas, but as the difference is as much as a quarter in length this should be easily noticed. Before coming to any decision it is wise to look at all the kittens in this way, and one then usually finds that one can divide them into sexes without a great deal of difficulty. Practice makes perfect in this as in most matters of decision, and one would be unwise to kill supposed females after a first attempt at sexing. There is sure to be an experienced breeder somewhere near at hand who would come and check results for you.

The greatest difficulty occurs when the kittens are uneven in size, for a small male may look like a female. Thus when estimating the distances one must also bear in mind the size of the kitten.

While one is gaining experience with the first litters it is a good plan to check up on one's findings every few days, for by the end of the first week there should be little chance of making a mistake.

Although these instructions are a contradiction of the advice that newly-born kittens should be left alone as much as possible during the first few weeks, one has to gain experience in such matters, and this can only be done with one's own kittens. After the first few litters have been sexed, one examination for a few seconds will be all that will be necessary when dealing with future families.

Shock

See Electric Shock and Accidents.

Show Entries (*by A. C. Jude*)

Having decided to compete at a forthcoming show, one should immediately write to the Show Manager concerned for both Schedule and Entry Form.

Every care is exercised with the preparation of Schedules, for the object is to aid both Exhibitor and Show Manager alike. For this reason the Schedule should be carefully studied, and its directions strictly adhered to.

The Schedule will contain the General Rules, Show Rules and Memoranda, together with list of classes and their definitions.

The varying amounts of Entry Fees, and Prize Money payable, are also set out.

The General Rules is a list of instructions, with general information needed by the Exhibitor before Show Day. The Show Rules give clear indication of procedure and regulations for Show Day itself. The Memoranda usually include such matters as method of entries, instructions regarding correspondence, and some guidance concerning accommodation for Exhibitors.

When a show is held under " Governing Council " Rules, it is usual, especially in the case of Championship Shows, for a list of these special Rules to be sent to the intending Exhibitor, with the Schedule and Entry Form. As all exhibits entered at this class of show must previously be registered with the Governing Council, a Registration Form is similarly enclosed.

The Exhibitor must now turn his or her attention to the completion of the Entry Form. This is quite an easy matter, but as a guide a copy of a usual Entry Form is illustrated. It should be noted that the entries for each cat, kitten or litter occupy one line only. It will also be noticed on the illustration that under " class or classes entered in ", " 54 " on the second and third line is underlined. On the first line " 54 " also appears. The underlining indicates combined entries, in this case in a " Team " Class. This underlining also assists the Show Manager when checking the amount of Entry Fees enclosed. It is most important that the Exhibitor should state clearly in the space provided the Clubs of which he or she is a member. Failure in this respect may deprive the Exhibitor of Cups or Special Prizes offered.

In due course the Exhibitor will receive the numbered tallies for the exhibits, and in the case of rail stock addressed labels for the travelling basket. The numbers from the tallies must be written on the bottom of the travelling basket labels, and these must be firmly secured to the basket. Space is provided under the address flap for the owner's name and address to be written for the return journey.

A white blanket should be used to line the bottom of the basket, as this can then be used in the show pen. A small sanitary tin should be sent with each exhibit. A small, round sandwich tin is very suitable, and being shallow this is easily tucked away inside the travelling basket.

When making entries it is a good plan to advise the Show Manager whether or not cats or kittens are to be fed. Before being sent to a show exhibits should only be fed with solid food and even this in moderation.

AMOUNT ENCLOSED—

£ 4 : 2 : 6 for Classes

£ : 3 : - for Double Pens

£ : 2 : 6 Donations

ENTRY

(for seven

RULE 33. A very severe fine shall be imposed on any Exhibitor who of the Show been exposed to any infectious or contagious illness within cat or kitten if such exhibitor has had any illness in his or her exhibiting at any show for the remainder of the season. Anyone found least 12 months by the "G.C."

Class or Classes entered in	Name of Cat	Breed	Sex	Breeder
21, 24, 52 54, 87, 89.	THE PLAYMATE OF THE COURT.	BLUE L.H.	M	MRS. OGLETHORPE
21, 24, 26, 54 87, 89, 90.	OXLEYS PETER JOHN.	BLUE L.H.	M	MISS E.M. ALBRECHT
25, 26, 53 54, 87, 90	OXLEYS MISS DICKIE.	BLUE L.H.	F	MISS E.M. ALBRECHT
56	LITTER	CREAM L.H.	2 M 1 F	OWNER

I hereby certify that I have read the Rules of the "Governing

ENTRIES and FEES to :

MR. A. C. JUDE (Show Manager),
3 Hill View Road, Mapperley, Notts.

Closing date : Thursday, Nov. 1st, 1945.
No late entries accepted.

FORM

entries)

State if Lunch is required 2 PLEASE

State if Tea required 2 PLEASE

Hotel accommodation—
see Schedule page 5

exhibits a cat or kitten which to his or her knowledge has at the date the period of 21 days prior to the date of the Show, or who exhibits a cattery during that period, or such exhibitor shall be suspended from guilty of making a false declaration will be liable to suspension for at

Date of Birth	Registr'n No.	Sire	Dam	Double Pen
3RD. MAR: 1940.	32236	OXLEYS BLUE JOHN.	CH: FIFINELLA OF THE COURT.	YES.
5TH. AUG: 1943.	34087	THE PLAYMATE OF THE COURT.	OXLEYS BLUE PEARL.	YES.
10TH. SEPT: 1944.	35646	THE PLAYMATE OF THE COURT.	OXLEYS BLUE PEARL.	NO.
31ST. AUG: 1945.	38620 38621 38622	PERIVALE MASTERFUL.	BYWAYS FAIRY.	YES.

Council," and this Show's Regulations, and agree to abide by them.

Signature of Exhibitor
(MR., MRS. or MISS)

State if Member of Notts. & Derby Cat Club YES, "N.C.C."
or any other Club or Society "B.P.C.C." "C.C.C." "Y.C.C.C."

Address

.....

Show Fever

Show fever has no significance as a name in veterinary practice, as it is merely a popular name attached to a definite and easily recognizable disease common to the cat. Actually the disease is infectious enteritis. The name " show fever " has been applied because from time to time an outbreak of this scourge of cat breeders has been traced to an animal which a short time previously had been exhibited. It must be quite obvious that when a large number of cats are grouped together in close contact, there is always danger of some disease spreading among them. It may be a common cold, in which case little notice is taken, for this complaint is not of serious consequence. If, however, infectious enteritis is passed from one cat to another, the situation is entirely different. The mortality rate is so alarmingly high that attention is then focused on the cause of the outbreak. The more cats that come into contact the greater the possibility of the spread of disease.

In normal times precautions can be taken to minimize the risks when sending cats to shows. Experience has proved that cats injected several weeks before the show season with Septicæmia Hæmorrhagic Bacterin, and again injected some weeks later, develop an immunity which in most cases prevents the injected animals from contracting the disease. Unfortunately this immunity is not permanent, but lasts for probably six or seven weeks at the most. In practise, however, it has been noticed that with some cats the immunity given lasts for a long period, and animals injected years before have passed unscathed through an epidemic in the cattery. It would be unwise, however, to assume that such immunity resulted from the previous injections ; in fact it may be that older cats are naturally less susceptible to infection.

Show Pens

Breeders who intend to show their cats should purchase one or more show pens so that their future exhibits may be accustomed to confinement in such narrow quarters before having the experience for the first time at a show. The noise and excitement of a show is sufficient to disturb even the most placid cat. Confinement in a show pen is just another hardship.

After a few attempts to escape between the bars, cats and kittens usually settle down and accept the situation philosophically. The training periods should be short at first, but later they can be increased very considerably. The Fancy press usually

carries advertisements from the makers of such pens, the price of which is quite reasonable.

The floor of these pens is usually made of sheet metal, while the sides and top are of heavy gauge galvanized wire. Being made entirely of metal they are easily cleaned and disinfected, and are unlikely to harbour parasites. An excellent method of cleaning, when there is need for scrubbing, is to rub the cage over with rag dipped in methylated spirit.

Care must be taken, both at home and at the show, to see that there are no loose ends of wire, as these are most dangerous to eyes. Furthermore, a cat is sure to rub against any loose ends and tear its coat. Such damage cannot be put right in a short time, and as competition on the show bench is always keen, a torn coat is no help to the highest honours.

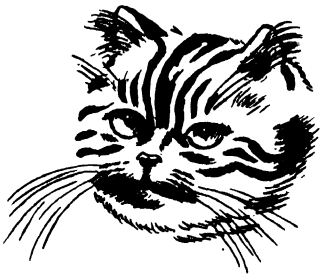
When not in use show pens should be rubbed over with a greasy rag, for this will prevent the formation of rust.

Show Standards

Show Standards have been fixed for all breeds of cats, and they will be found in this book at the end of the section dealing



EAR TUFTS MAKE SMALL EARS





TABBY MARKINGS

with each particular variety. The breed clubs, when formulating such standards, have tried to set up an ideal towards which breeders can aim, and in that respect they are standards of perfection, for no cat ever attains completely all the points desired in the perfect specimen.

Fortunately most of the breed clubs are prepared to alter such standards when individual items in them have proved either impossible or undesirable. Naturally such changes are not brought about without opposition, as was shown some thirty years ago when it was decided to demand a green eye in Silver Tabbies instead of the hazel eye which was stipulated in the earlier standard. The wise breeder, however, will do well to breed to the standard which is in operation, and when changes are suggested he should be prepared to consider them intelligently.

It is the aim in all livestock breeding always to strive for improvements, and the standard of today may be out of date in

twenty years' time if breeders will only set before themselves a high standard. Ultimate perfection is unattainable, but it is an object worth attempting.

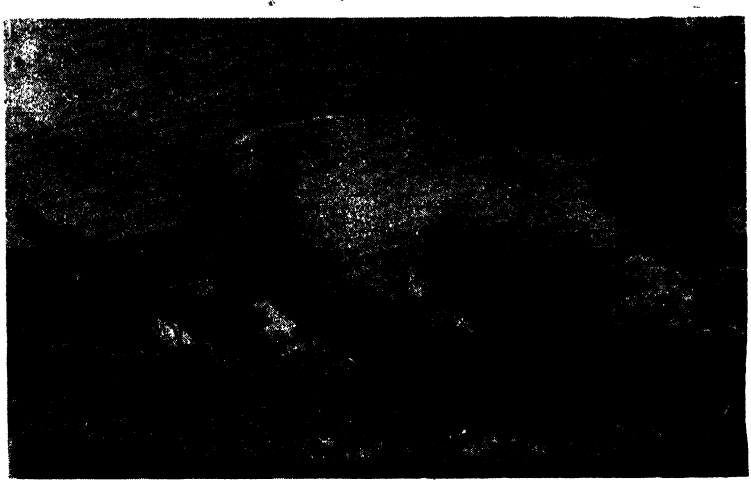
New official standards proposed by the breed clubs must be submitted to the Governing Council for its approval.

Siamese Cat, The

There is not the slightest doubt but that the Siamese cat is the most popular of all the short-haired varieties, and with the passing of the years that popularity becomes even more marked. Today the lists of registration which are published monthly show that far more Siamese are being bred than any other variety, whether short or long-haired.

Little is known of the origin of this variety, although many theories have been put forward, some reasonable, but others entirely fantastic. What is known for certain is that the first cats were imported into this country from Siam. The original pair were brought here in 1884 by Mr. Owen Gould and presented to his sister, Mrs. Veley. These were shown at the Crystal Palace in 1885. No one apparently has ever disputed these facts, which probably means that they are true.

It was at one time believed that in their native country these cats were bred exclusively at the court of the king, but no proof has ever been brought forward to endorse this belief. Apparently even in the country of origin they were comparatively rare, and there is no evidence that they were considered valuable.



S.P. SIAMESE
CH. CHIRMON LON



S.P. SIAMESE
CH. PRESTWICK PERTANA

According to the reports of those who imported them the tail kink was a common feature of all these cats, but none of them showed the squint which later became quite common. The first squint seems to have been reported some fifteen years after the first pair, Pho and Mia, were brought over.

Acclimatization of these early adults seems not to have been difficult, but the rearing of kittens was found to be extremely precarious, and when later they were introduced into America, almost complete failure followed the attempt to breed them even as late as 1912. As the years passed and breeders were prepared to allow the young to lead more natural lives, success was achieved in both countries. Even today Siamese kittens need treatment somewhat different from the long-haired varieties, but they certainly do not thrive under hothouse conditions.

There is something about Siamese which distinguishes them in character from any other variety, for they possess a sturdy independence of outlook which endears them to their owners. If a Siamese wants something he will do his utmost to get it, and loud and insistent will be his plaints until he has obtained

his desire. These cats, far more than any other variety, know how to voice their needs, and seemingly they realize that their noisy clamour is very likely to achieve its object. They are shameless thieves, and their table manners are rarely refined, yet even their trivial vices add to their attractiveness.

No cat is more companionable than the Siamese, and they delight in human company, for which they seem to pine when it is denied them. Although they appreciate so much their contact with human kind, they are quick to sense injustice, and a Siamese which has been rebuffed is prepared to show its innate spirit of independence for long afterwards.

At one time it was thought that Siamese were not good mixers with other varieties, but experience has shown that they are in a comparatively short time prepared to be on speaking terms with other varieties, though they show a marked tendency for their own kind.

The love song of the Siamese female is something which has



Photo : S. F. Heath

S.P. SIAMESE
CH. ANGUS SILKY

to be heard to be believed, and where there are neighbours these loud and insistent howls are not conducive to good neighbourly feelings, particularly as the greatest vocal effort is usually reserved for the middle watches of the night.

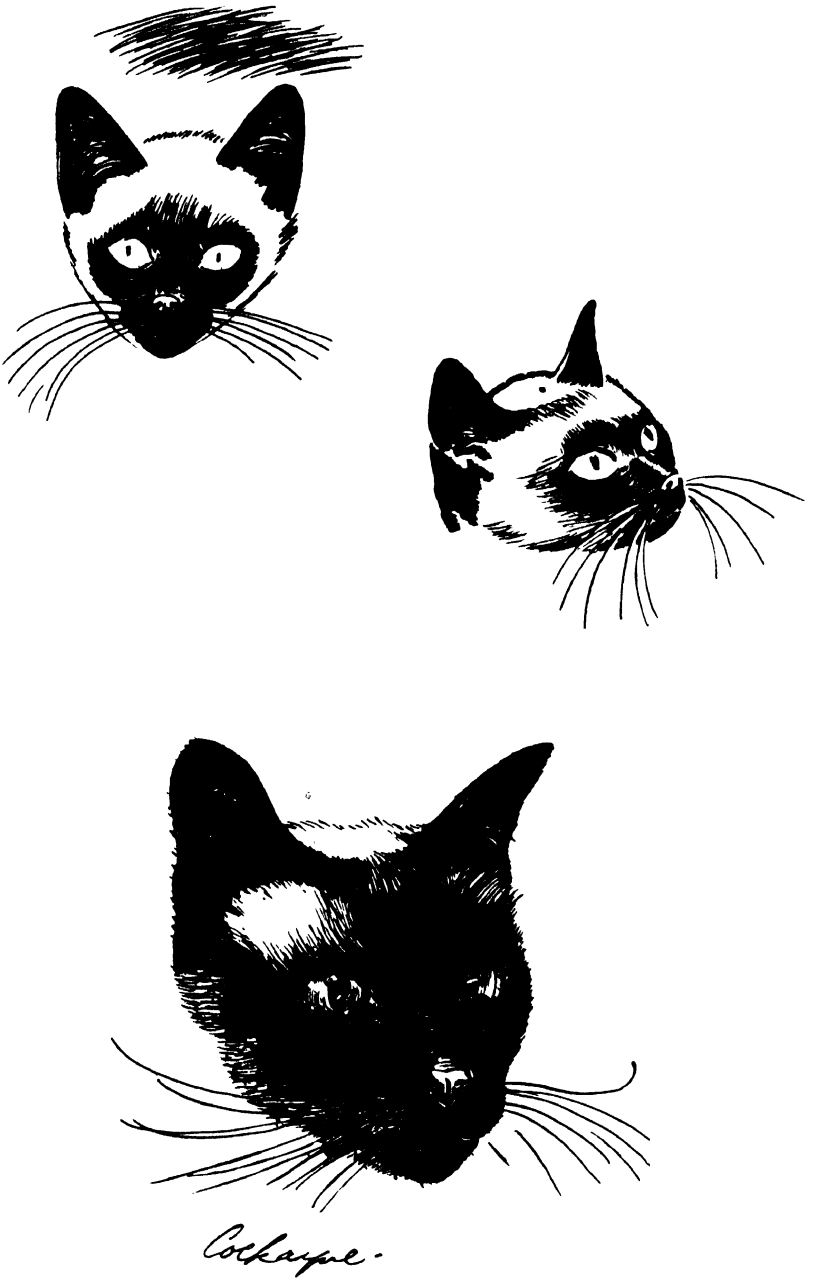
It certainly cannot be denied that the outstanding virtues of the Siamese have to be weighed against their obviously bad qualities, and among these noise is outstanding. Furthermore, no variety of cat can equal the Siamese for destructive ability. They seem to take an obvious delight in ripping to shreds soft furnishings which the owner may regard as priceless, and this habit of indiscriminate destruction requires considerable patience if it is to be broken. Yet on balance they are most attractive and worth keeping, and those breeders who make a start with Siamese become devoted to them.

A good Siamese must display very definite physical characteristics which, even apart from their unusual colouring, distinguish them from any other short-haired breed.

The head should be definitely wedge-shaped when viewed from the side, and the full view must show the marten type of face which the standard demands. The ears, which are held erect, must be large and wide at the base so as to help to produce that appearance of alertness which is so natural to the Siamese. The body is long and spare, and possesses that slimness of outline which is best described by the word svelte. The hind legs are always slightly longer than the forelegs, and this fact produces a gradual rise in the line of the back from the neck to the root of the tail. The tail must be long, thin and tapering like a whip lash. There are today many Siamese in which the whip tail has disappeared, and in its place is found a shorter tail which is far too thick at the base. A small kink at the tip of the tail is allowed, but most breeders now prefer tails without kinks. This means that breeding practice is tending to eliminate what was for a period of years regarded as a characteristic of the breed.

One of the most attractive features of Siamese is its remarkable eye colour, which, in the best specimens, is sapphire blue. It is a difficult colour to obtain, and the breeder who retains it in his stock must select his breeders with the utmost care. Depth of eye colour and density of points and a dark body go together, but selection will do much to keep eye colour in cats whose coats still retain the fawn colour which is certainly preferable to the chocolate brown found in some specimens whose eye colour is outstanding. The eye should show the traditional oriental slant, but a squint is not desirable.

Mask, ears, feet, legs and tail should be seal brown, and this,



THE SIAMESE MASK

TWO KITTENS AND AN ADULT



SIAMESE
BRATTON TOR CHARMIAN

when combined with fawn-coloured back gradually paling to cream on the belly, produces a cat of striking appearance. There is a tendency for the colour on the back to become more brown than fawn, and in many cats the belly colour is certainly an off-white rather than cream. Few specimens approach closely the ideal in the matter of colouring. It must be remembered that there are two things which affect the colour of coat in Siamese. They are age and temperature. The older the Siamese grows usually the darker the coat, but it is a most remarkable fact that a dark cat will sometimes regain the pale coat of its youth even in its fifth year. Here we are probably seeing the strange influence of temperature. In the section dealing with colour breeding reference is made to a piece of research on this subject.

Siamese kittens are born almost white without any sign of markings, although the first indications of the future seal points are soon visible. The extent and density of colour of the points increases each month, but many a cat is fully twelve months old before one can judge of its true quality from the point of view of colour. The mask is the last coloured area to be completed, for it is only in the adult cat that it is linked by tracings to the ears.

Siamese with blue points in place of the customary seal are now growing in popularity and have a club of their own. There is some doubt as to whether the Blue-pointed Siamese are a definite sport or whether they first appeared as the result of the infusion of the blood of some other breed. The fact, however, remains that the Blues have now become standardized in a way which definitely separates them from the Seal-points. Attempts are now being made to ensure that they breed true for colour of points, and as far as possible crossing with the Seal-point is being avoided. When, however, there are only a few Blue studs available, the danger of inbreeding is very real, and it may be impossible wholly to avoid the cross-mating of the different colours. There seems to be no real reason why other



BLUE POINT SIAMESE

Left : CH. OY-OY

Right : CH. OY-SUN

colour varieties should not be added to the breed if Siamese breeders are prepared to experiment.

Generally speaking Siamese are prolific breeders, and provided that the breeder realizes the value of warmth during the first few months, the kittens are not difficult to rear. An adult Siamese is as sturdy as any other variety.

The Siamese has so many admirers that one can feel sure that this most attractive breed will in the course of years be still further improved.

(This section was written with the help of notes supplied by Mrs. Duncan Hindley, whose Prestwick cats have gained for themselves international repute.)

OFFICIAL STANDARD

Seal-pointed

Shape (Body and Tail) : Medium in size, body long and svelte, legs proportionately slim, hind legs slightly higher than front ones, feet small and oval, tail long and tapering (either straight or slightly kinked at the extremity).

Head and Ears : Head long and well proportioned, with width between the eyes, narrowing in perfectly straight lines to a fine muzzle, giving the impression of a marten face. Ears rather large and pricked, wide at base.

Eyes (Colour and Shape) : Clear, bright and decidedly blue, shape oriental and slanting towards the nose. No tendency to squint.

Body Colour : Cream, shading gradually into pale, warm fawn on the back. Kittens paler in colour.

Points : Mask, ears, legs and feet and tail dense and clearly defined seal brown. Mask complete, and (except in kittens) connected by tracings with the ears.

Coat : Very short and fine in texture, glossy and close lying.

SCALE OF POINTS

Type and Shape,	Head	15
	Ears	5
	Eyes	5
Body		15
Legs and Paws		5
Tail		5
Colour, Eyes		15
Points		10
Body Colour		10
Texture of Coat		10
Condition		5
		100

The Standard for Blue-pointed Siamese is the same as the above with the following exceptions :

Points : Blue.

Body Colour : Glacial white shading gradually into blue on the back (the same cold tone as the points but of a lighter shade).

Eye Colour : Clear bright china blue.

Silver Tabby Persians

Silver Tabbies have very few adherents at the present time, and in the latest Stud list published by the Governing Council there are only three studs at public service. Real progress with any variety is most difficult unless there are a number of breeders who can share the improvements they make with other breeders who have worked for improvements in different directions.



SILVER TABBY
CH. OONAH OF INVERGLOY

At the beginning of the present century the Silver Tabby was popular, and according to the reports of fanciers of those days, quality was high. At that time the recognized eye colour was hazel, but there was disagreement on this point and apparently a decision was made that eye colour should be green. It is stated that from that day deterioration set in. It is practically impossible at this later date to get to know the true facts, for most of the breeders of Silver Tabbies of the early days of the century are now dead.

It is interesting to note that the official standard does not mention colour of eye ; in fact eyes are not in the standard at all.

With this variety there is an excellent opportunity for new fanciers to attempt to restore its popularity. The attraction of the silver coat with its jet-black markings cannot be denied, and if good type and density of markings can be produced in the same cat, its success on the show bench would be assured. Whether one can expect black markings with a green eye is a matter which has caused considerable controversy. That there is a correlation between general pigmentation and eye colour is, however, an undoubted fact.

Various crosses have been suggested for the improvement of Silver Tabbies, but for some of them there seems to be little justification. The late Mr. House recommended the use of a Blue, but probably crossing with a Black of good type would provide quicker results. In the first generation the eye colour of the Silver Tabby would be masked by the dominant orange eye of the Black, but a back cross to Silver Tabby should restore it in some of the kittens of the next generation. When the tabby varieties are bred like to like for many generations, there is always a tendency for definition of markings to be lost. As will be seen in the section dealing with Black Persians, Mr. Cyril Yeates suggests the use of a Black cross with the object of maintaining density of markings.

When breeding Silver Tabbies great care must be taken to discard animals which show a brownish tinge to the coat. If this fault is bred into a strain it is most difficult to eradicate.

Improvement in type must certainly be aimed at by future breeders, for in this respect Silver Tabbies often leave much to be desired. Normal selection may produce results, but this method is always very slow, and there is a good opportunity for experiment. If the short nose of the Blue, with its width of skull and neatness of ears, can be achieved, many more breeders would be attracted to the variety. Perhaps someone will make the attempt.

OFFICIAL STANDARD

Colour : Ground colour pure pale silver, with decided jet black markings, any brown tinge a drawback.

Head : Broad and round, with breadth between ears and wide at muzzle, short nose, small, well-tufted ears.

Shape : Cobby body, short thick legs.

Coat and Condition : Silky in texture, long and dense, extra long on frill.

Tail : Short and bushy.

SCALE OF POINTS

Colour	40
Head	20
Shape	15
Coat and Condition	15
Tail	10
	100

Skin Diseases

See Eczema, Mange and Ringworm.

Smoke Persians

Smokes are a variety which have fallen on evil days, and the popularity which was once theirs some thirty years ago has departed. Today there are very few breeders who take an interest in the variety, and until such time as enthusiasts are prepared again to put a lot of work into the breed, there is little hope of a return to popularity. Old fanciers contend that modern breeders have not produced a good Smoke for many years, and they speak with pride of some of the Smokes of the past, such as Champion Backwell Jogram, who could hold his own with males of any variety. Perhaps one day there will again be a return to popularity, but the path cannot be easy, as selective breeding is a very slow road to marked improvement, and outcrosses introduce unwanted characteristics which are hard to eradicate. It may be that a Smoke of outstanding quality will one day appear in a litter, for such things do occasionally happen, and one animal of unexpected perfection may help to produce descendants of the same quality.

The Smoke is a cat of arresting appearance with its face, head and paws of the most intense black. A black face surrounded by a silver frill is an attractive combination of colour, and even the blackness of the ears is contrasted with silver ear tufts. The fur on the body should shade from jet black on the back to silver on the sides and flanks. The intensity of black is not so marked on the body, as the silvery white of the undercoat is displayed by every movement that the cat makes. Every hair on the body should be silver to the root, except for a tip of jet black. A cat, some of whose hairs are not tipped with black, loses much of its beauty. There certainly must be no rusty tinge to the black, for this would be a serious blemish to the beauty of this variety.

The undercolour should be pure throughout, and no smut

should be seen in this pale silver undercoat. Silver is perhaps a misleading term, for the colour is usually an off-white.

When born a Smoke kitten is almost black, and it is only after some months that the variations and gradations of colour appear. For the first six months it is very difficult to judge of the possible quality of the adult cat, and the wise breeder will not dispose of kittens much before they are six months old. Those kittens which show at an early age the light undercoat are the ones most likely to be outstanding later on.

To improve the quality of present-day Smokes, it may be necessary to resort to an outcross. Choice, however, is very limited, for one dare not make use of any of the tabby varieties. Even at present there is a tendency in some strains of Smokes for tabby markings to appear on the head. A cross with a Silver Tabby, which has sometimes been recommended, would definitely be most unwise.

The only possible crosses seem to be with a Black or a Blue. When a Black male is chosen he should be of good size and



SMOKE

CH. SUFFOLK DUMPLING

great strength of bone. These qualities are not characteristic of all Blacks. The Blue cross might also be tried if the Smoke has been pure bred for at least five generations. If two females were taken, and one was mated to a Black and the other to a Blue, the cross-mating of the young from these two families might produce a Smoke with the type of the Blue and the ebony blackness of the Black. It must nevertheless be remembered that few kittens produced by such matings would be useful for the future breeding of Smokes. The great mistake made in experimental breeding is that usually breeders are not sufficiently ruthless in discarding cross-bred animals and confining their breeding operations to the select few. Experimental work is bound to produce far more disappointments than successes, and it will need much perseverance to restore the Smoke to its former eminence among show cats.

(*This section was written with the aid of notes supplied by Mrs. H. V. James, whose Champion Backwell Jogram was one of the outstanding Smokes of the past.*)

OFFICIAL STANDARD

A Smoke is a cat of contrasts, the undercolour being as white as possible, with the tips shading to black, the dark points being most defined on the back, head and feet, and the light points on frill, flanks, and ear-tufts.

Colour : Body : Black, shading to silver on sides and flanks. Mask and Feet : Black, with no markings. Frill and Ear-tufts : Silver. Undercolour : As nearly white as possible.

Coat and Condition : Silky in texture, long and dense, extra long on frill.

Shape : Head : Broad and round, with width between ears, snub nose. Ears : Small and tufted. Body : Cobby, not coarse but massive, short legs.

Eyes : Orange or copper in colour, large and round in shape, pleasing expression.

Brush : Short and bushy.

SCALE OF POINTS

Colour	40
Coat and Condition	20
Shape	20
Eyes	10
Brush	10
	100

N.B.—The above is also the Standard for Blue Smokes, except that where the word "black" occurs, "blue" should be substituted.

Sneezing

See Catarrh.

Snuffles

See Catarrh.

Sore Throat

See Distemper, etc.

Spaying

During recent years the spaying of female cats has gained considerably in popularity, and as experience has been gained the risks of this major operation have been appreciably diminished.

Female cats can be a source of great annoyance to their owners, for when once they have reached maturity they will come into season at frequent intervals unless they are mated and are bearing kittens. It is quite impossible to say how often a particular queen will call, for there is not only considerable variation in the period between each "season" with different females, but the same irregularity is found with individual cats. There are some which call regularly every six weeks, while there are also others which are quiet for no more than a week. Occasionally a queen will start to call again within a few days of the birth of her litter.

It is certainly bad for any female to be allowed to call time after time and not be mated; in fact it should be a rule, both of wisdom and also kindness, to allow a queen to mate at her third calling whether she is a maiden or a female which has already borne kittens. A queen who is continually shut up at these times until her period of œstrum is finished will sooner or later develop abnormalities of body or mind, and perhaps both. Cases of hysteria arising from sexual causes, and necessitating the destruction of the queen, have been recorded more than once, and many cats which are frustrated in this way become both bad-tempered and spiteful.

There is also to be considered the effect of this frequent calling upon the owner and his household. Some queens are not particularly noisy at such times, but others have to be heard to be believed. It would be a stout heart and steady nerve that could endure for any length of time the calling of a Siamese cat when she was in full cry. The noises she makes are so loud that she

seems to attract all the males for miles around, and from seeming perversity the noise is usually greatest at night. Some stray toms are certain to get into the house even if they are unable to reach the queen, and they will leave behind unpleasant smells as a proof of their visit.

If the cat owner does not want to breed pedigree kittens, the queen may be allowed to find her own mate and produce a mongrel litter. If no kittens at all are wanted, or will be permitted, then the only remedy is the spaying of the female. The sensible person would, of course, not consider the keeping of a female, and then no difficulties need arise.

Spaying is an operation which can only be carried out by a veterinary surgeon, and preferably by one who specializes with small livestock. The solution from the physical point of view is perfectly simple in theory. The ovaries produce the ova which, when fertilized, will eventually develop into kittens. As a result of the functioning of the ovaries, certain physiological changes take place, and these in turn produce the period of œstrum. Thus, if the ovaries are removed, there will be no period of œstrum and the cat will not call. Practice, however, does not always fit in with theory, and instances are found where the cat, although unable to produce kittens, continues to call from time to time. The explanation for this phenomenon must be provided by the scientist.

Until quite recently it was common practice with some vets. to perform the operation, and then to send the animal home within twenty-four hours. A number of fatalities, however, has convinced most vets. that a longer period of rest must be allowed if complications with possibly fatal results are to be avoided.

The operation must always be regarded as serious, and the patient has to be given close care and attention for a week. In this way the dangers of peritonitis and pneumonia will be almost entirely eliminated. Warmth, and a minimum of exercise, will soon permit the wounds to heal, and in a short time the animal will be as fit as ever.

It is possible that the removal of the ovaries may have an ageing effect upon the cat, and it is more than likely that she will tend to grow fat. The removal of glands often alters the natural metabolism and produces a lack of balance resulting in the formation of this excess fat. Careful attention to diet will help to keep this tendency under control.

At the present time there seems to be considerable divergence of opinion as to when this operation should be performed. Some advocate the removal of the ovaries before the queen has

called, others before she has had a litter, while there are still others who say that the operation should take place after the first litter has been weaned. For the general run of owners the only advice that can be given is that the decision should be left to the vet. who is to be asked to perform the operation.

This section has regarded the question of spaying entirely from the point of view of convenience, but there is also another side. Some cats have such a bad time when they have kittens, with risk not only to the life of the family but also to their own, that one is at times compelled to have the operation performed to prevent further families with the attendant risks.

Finally, there are also diseases which render the operation imperative, but, as in these cases the advice comes from the vet., the diseases and their consequences must be left to text-books of veterinary science.

Spraying

An adult male usually develops the objectionable habit of spraying a few drops of urine on walls and furniture when he is placed in a room where females have been running. Rarely is there any visible sign of his action, but the smell of a male cat is very strong and unpleasant. This is, of course, one of the reasons why a male cat which has not been neutered cannot be kept about the house.

It is very difficult to find the actual places in the room which have been soiled, and the only cure is to rub over the floor and skirting boards and the base of any furniture which reaches within 6 inches of the ground. A damp rag dipped in a 5 per cent solution of formaldehyde will usually remove all trace of smell. Formaldehyde is an excellent deodorant, and, if used in weak solution, cannot do any harm. Milton may also be used in the same way.

To attempt to cure a male of this objectionable habit is labour in vain, for the action is instinctive. Some males give no trouble in this respect during the winter months, but most of them offend as soon as the normal breeding season arrives.

As the male acts in this way as a result of sexual excitement, one rarely experiences the same difficulty with neuters, and on the rare occasions when a neuter is guilty the result is not as objectionable.

Squint

For some reason which is not easily explained, quite a number of Siamese cats develop a decided squint. The standard asks for

an oriental type of eye, but does not accept the squint as being desirable ; in fact, any cat showing this muscular weakness is penalized and would not be likely to stand high in its class. In America, however, the squint is looked upon as a sign of a Siamese of the highest quality, and those animals which do not squint are not equally prized. It is rather strange that this should be the case, for there can be no question but that a cat with normal eyes presents a more attractive appearance.

Those Siamese which have a pronounced squint seem not to be defective in vision, and it has been stated that this was at one time regarded as being a characteristic of the breed before it was introduced into this country. Some twenty years ago a large number of Siamese bred here certainly had a squint, but selective breeding has now almost removed this fault, if it is a fault. One can only recommend that breeders should adhere to the standard, and avoid breeding from animals which display this peculiarity in any marked degree.

It must be added that it is extremely rare to find a squint in any other variety of cat, unless there has been some disease in the animal's past to account for it.

With the congenital squint of the Siamese, each eye always looks inwards towards the nose, and never outwards, but when the peculiarity is the result of accident or illness, the affected eye may turn in either direction.

Standards

See tables at end of Breed Sections.

Sterility

When a queen is sent away to stud on a number of occasions and yet fails to produce kittens, one is forced to the conclusion that here is a case of partial sterility at the very least. It is, however, sometimes the stud who is at fault, although most breeders are sufficiently wise to prove their males before putting them at public service.

When a female is found to be sterile it is very difficult to know what one can do to remedy the matter, for there are so many possible causes, both functional and organic. It is possible that the condition is merely temporary, but, on the other hand, it may be of a permanent nature for which no remedy exists.

Here attention must be confined to those aspects of the case in which the condition can be remedied by good management.

Diet undoubtedly plays an important role in the normal functions of the body, and if the feeding is wrong both male

and female may well display impaired fertility, if not actual sterility. It is now known as a scientific fact that lack of Vitamin E may produce such a result, and it is, therefore, only wise to make sure that the animals receive this vitamin if they are intended as breeders. One can purchase Wheat Germ Oil in various forms, both natural and synthetic, and this substance is a most valuable source of Vitamin E. Two capsules or tablets each week will amply supply the quantity required, for when dealing with vitamins it must be remembered that only traces are needed. If, in addition, one makes sure that the general diet provided is well balanced, then the right physical condition for good fertility has been supplied. During the breeding season a male may benefit from a daily dose of this substance which many breeders prefer to administer in the form of Ephynal, a Roche product.

When a queen has missed on a number of occasions, it is a good plan to test the quality of her vaginal secretions. The mere novice can do this, for the only requirement is some blue litmus paper. If, when this is inserted into the vagina, it turns red, the indication is that the secretions are acid. Although this cannot immediately be assumed to be the cause of the sterility, it is a fact that the spermatozoa contained in the semen of the male lose their motility if they come in contact with secretions which are highly acid. Conception takes place beyond the vagina inside the uterus, and thus, if the sperms become immobile, they will not reach the ova to fertilize them. A very weak solution of bicarbonate of soda, if injected into the vagina an hour or two before the mating, may produce the desired effect. Never attempt this until a qualified man has shown you how to do it. A weak solution in this case would be a saltspoonful to a cup of warm water.

Some queens do not come into season in the normal way, and they may be a full eighteen months without calling. This is so unusual that treatment is indicated. There are certain natural substances called œstrogens which are produced within the body and regulate the periods of calling, the changes which take place during pregnancy, and also the development of the milk glands. If these natural œstrogens are not produced in sufficient quantity, there is every chance that the queen will be sterile. Today science can produce such substances synthetically, and their injection into the body will probably bring the female into season. It is extremely likely that this stimulus will later bring about the natural functioning of the various glands concerned. Many veterinary surgeons today can give consider-

able help in this matter, and have had experience in the use of Stilboestrol and similar substances when dealing with cats.

Diseased or deformed organs producing sterility are quite outside the province of the ordinary breeder, but they are often the cause of sterility which in such cases is likely to be permanent.

Although, when kittens do not result from an apparently successful mating, it is usually the queen which is at fault, it sometimes happens that the male is found to be impotent.

There are cases known of males where the testicles do not descend from the abdomen, and when this does not happen the male is usually sterile. The provision of considerable quantities of Vitamin E, as has been suggested with females, may bring about an improvement, but operation to remedy the defect is not common practice. If one testicle descends there is no reason why the male should not become a satisfactory breeder, although it must be admitted that few do become valuable studs. A good meat diet, and plenty of exercise; are conditions conducive to potency in males, and both points should receive careful attention.

It is difficult to say how far poor fertility is hereditary, but one does notice in actual experience that a queen who is remarkably fertile herself usually has daughters who display a similar fecundity. Remembering that children inherit characteristics from both parents, it would be most unwise to mate together a male and female both of whom displayed sexual abnormalities. If a sire himself has only small families when mated to a variety of queens, one must expect to find some of his sons showing similar characteristics. There may be sound reasons for using a male who only sires small litters, but one must not lose sight of the fact that there are also disadvantages. The same remark applies with equal force to females.

Stewards

At a show a judge needs one or more stewards to help him if he is to complete the classes allotted to him within a reasonable time. The more efficient his stewards the better able is he to carry out satisfactorily the duty for which he has been appointed.

Most people who agree to act as stewards realize their responsibilities and know what is expected of them, but this is not always the case. Whenever one judges at a show, no matter what the animals are, there is a wide difference in the quality of work performed by the different stewards.

The judge is there to make up his own mind, and if he is a good judge he will resent the advice or suggestions of a steward unless he asks for them. Good judges rarely discuss the exhibits

even with their stewards until they have decided the placings. However experienced the steward may be with the particular variety that is on the table, if he is wise he will be silent.

Highly excitable people rarely make good stewards, for they disturb both exhibits and judge. Cats probably object to being on show, although there are a few placid creatures who are unruffled at all times. At a cat show the steward who makes nervous animals even more excited and tense is quite unsuited for the task he has undertaken. Rushing from pen to judging table rarely saves time ; efficiency does not imply haste.

Stewards should have everything ready for the judge well in advance of the scheduled time for the start of judging. Often long after the time fixed for the start stewards can be seen trying to get ready, and thus it is not surprising that judging has to go on until far too late in the day. These remarks apply as much to rabbit shows as cat shows ; in fact, shows of all types are from time to time characterized by this late starting. It is not always the stewards who are to blame, but there are some who seem to spend more time in conversation than preparing for the show.

All stewards should be dressed in some suitable overall or coat such as would be used when dealing with the animals at home. Here it must be emphasized that such clothes should be cleaned before every show. There is always a risk that infection may be carried from one show to another, or from the cattery to the show, and thus every precaution must be taken. The same care should be taken when returning home from a show, and clothes worn as a steward should not come in contact with the cats at home.

It is the task of the steward to fetch the exhibits from their numbered pens and to convey them to the judging table. This entails the taking of the animal out of its show pen, not always an easy task especially with animals that are highly strung. A cat that bites and scratches when one goes to pick it up at a show is rarely vicious, but has become alarmed by its new and unusual surroundings. Such a cat should always be spoken to before it is handled, as the human voice can do a great deal to restore the confidence of a frightened animal. An experienced person can usually sense quite quickly whether there is going to be difficulty or not. The cat that still sits quite placidly when spoken to rarely gives any trouble, but if, as soon as one approaches, it tries to force its way through the bars of the pen, it is wise immediately to put on a pair of stout leather gloves. By placing one hand underneath its chest, and the other under its haunches, the animal can be lifted quite easily,

and if there is no violent struggling one can safely remove the cat from the cage. When, however, the cat attempts to break loose, another hold must be used. In this case one hand must firmly grasp the scruff of the neck while the other grasps both back legs firmly. The cat will naturally object to being handled in this way, but it will be under control. When carried, this animal must have its back to the steward, as then even the front feet are unable to do any scratching. Even a calm and friendly cat should be carried firmly tucked under one arm, and must never be held facing the carrier, for if there happens to be anything to cause a fright, the face and neck of the steward may well bear witness of the fact for some time to come. When a cat seems unmanageable the judge should be informed, and it is for him to decide whether it is to be judged or not.

Once the animal has been placed on the judging table it must be held until the judge is ready to deal with it. Never at any moment should it be allowed complete freedom. If possible it is better to take the table to the cat rather than the cat to the table.

All judges and stewards need a basin, water, towels, soap and a disinfectant. Use should be made of these at frequent intervals.

At a big show a steward will have an exhausting day, but if he has used his eyes and taken an intelligent interest in the judging, much useful knowledge will have been gained, quite apart from the fact that he will have the satisfaction of knowing that he has played his part in making the show a success.

Successful stewarding is something which has to be learned, and learned by practical experience at the shows.

Stitch Abscess

Sometimes after an operation in which stitches have been required to close a wound, a small abscess forms in the hole through which the gut passes. This is rarely serious, and by the time it appears, the wound has so far healed that the particular stitch may safely be removed. Such abscesses are quite common, but can be largely prevented by dusting the wound twice a day with sulphanilamide powder. This can only be obtained through a vet., but after he has performed an operation he will probably be anxious for your co-operation in this daily treatment.

When an abscess has formed and the stitch has been removed, the powder should be spread thickly over the affected part. After this treatment there is rarely any further trouble, as the removal of the stitch opens the abscess, and the powder can thus easily reach the source of the infection. Prompt action is

necessary, as otherwise the irritation may cause the cat to bite or lick the wound and thus slow down the process of healing.

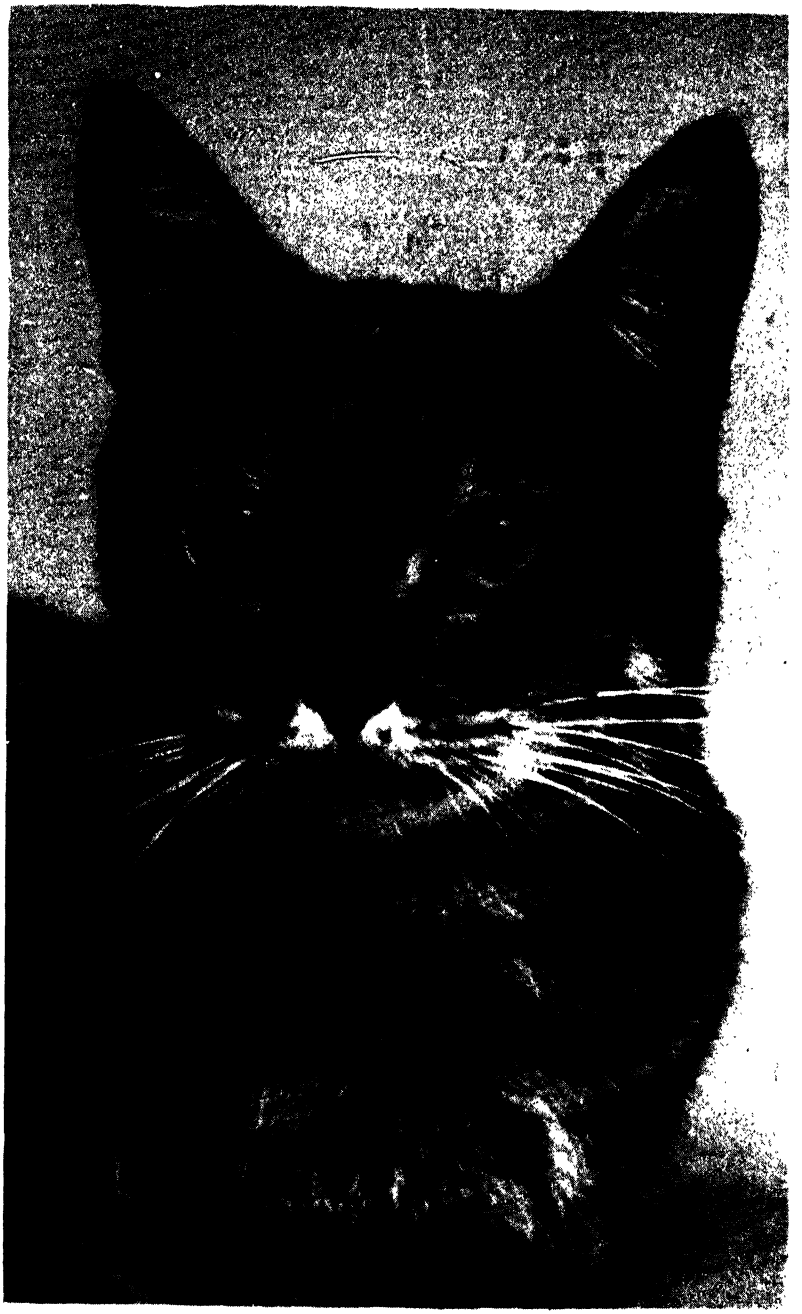
Stray Cats

It is natural that anyone who is keenly interested in and attached to cats should wish to care for any stray cat which is obviously hungry and wretched. For the cat breeder to take such a cat into the house is, however, most unwise. When one has one or a number of cats for which one has strong feelings of affection, whether they have a high monetary value or not, it is only prudent to keep them free from possible infection. This certainly will not be done if any stray cat is received into the house.

The life of the stray is usually hard, and the circumstances under which it is compelled to live make it very easy prey to diseases of all kinds. Such an animal may be the means of spreading diseases of the most virulent kind. Thus, however kindly one's feelings may be towards the stray, wisdom certainly dictates that it shall be removed to some place where it may not be a menace. Fortunately there are several welfare societies which will deal with strays in the only humane way possible ; either to find them suitable homes or destroy them painlessly.

That there should be no strays, or that their number should be very small, is obvious, but even today, unfortunately, there are still people who lose interest in a kitten when its attractive playfulness is over, and are prepared to cast it adrift to fend for itself. Other owners, perhaps a little less cruel in intention, are prepared to go away for holidays and to leave the cat to find what food it can. It is not surprising that such animals sometimes wander so far in search of food, that without any understanding of the meaning of holidays, they never return to their original homes. Is it too much to expect that all cat owners will one day develop a moral sense in connection with their pets and their treatment? Until that time arrives there will always be strays whose lives are a misery, and who quite unwittingly are a danger to other cats.

If, therefore, you are visited by a hungry and neglected stray, give it a good meal outdoors and then take it to the nearest centre of one of the welfare societies. It may be troublesome to have to do this, but it is at least humane. Even if one has to pay a small sum to have the animal destroyed because one cannot find any suitable centre within convenient distance, surely that is a small price to pay for the pleasure that cats as a race provide for humans.



A BRITISH CAT

Stud Books

From time to time the Governing Council of the Cat Fancy issues Stud Books containing the names of cats which have done well at the shows. Any owner, however, may have the names of his cats entered in this book upon the payment of a small fee. These books are not only of considerable interest to the breeder, but of the greatest value when an attempt is being made to trace a particular pedigree. Even in normal times the printing of these Stud Books is expensive, and unless breeders make it their duty to buy a copy, there is a heavy charge to be borne by the Council. The first of these books was issued in 1912 and covered the years from 1910 to March 1912. In 1917 a supplement was issued to the first volume, and from that date until the outbreak of the Second World War, seven more books were produced.

The Siamese Cat Club publish a Register of all Siamese cats whose names have been registered with the Governing Council. Although the earlier volumes are naturally not a complete record, it is nevertheless possible in many cases to trace back modern Siamese to the early importations in the last quarter of the nineteenth century.

The many difficulties of the war years have made it impossible to publish new Stud Books and Registers, but it is more than likely that the lists will soon be brought up to date. When public notice is given of their publication it is to be hoped that all breeders and cat lovers will make sure of obtaining a copy, for the cost of a few shillings is well repaid by the interest they provide.

Breeders should also bear in mind that these Stud Books could be made still more useful if owners would make a practice of entering any brood queens they have which, although they have not been successful in the show pen, have proved their worth as breeders. One can search the Stud Books in vain for the names of some brood queens which nevertheless figure largely in pedigrees.

Stud Cat, The

Stud cats must be kept, but no breeder should lightly undertake stud work. Just because one has two or three queens, that is no adequate reason for keeping one's own stud. So small a number of females is totally inadequate for a strong and active male. If his services are limited to a small number he will become both irritable and noisy. Stud work is not easy, and if one receives queens from other catteries, there is always a



Photo : Sport and General

CHINCHILLA

CH. THISTLEDOWN CARUS

definite risk of introducing infection. Thus very careful consideration must be given to this subject before a decision is made.

However, an outstanding male should be placed at public service, and, as he is a valuable factor in the development of some particular breed, he deserves and must have particular attention.

One of the gravest errors committed by some breeders is to allow their studs to be used far more frequently than is good for them or their progeny. It must be quite obvious that the male can only sire strong and healthy kittens if he is in first-class physical condition, and this cannot be maintained if he is overused. In the space of a year or two the reputation of a stud depends more upon the success of the kittens he has sired than on his own successes on the show bench. The guineas paid for stud fees may be a definite temptation, but even from the point

of view of cash returns it is foolish policy to exhaust the stud in a year or two when he might well remain a sound stud force for as long as ten years. The only way in which one can become a sound breeder is to see that the money side of the Fancy becomes one of the less important aspects of the hobby.

It is impossible to give a definite figure for the number of queens that a male may mate during a season, as so much depends upon the individual. One may say, however, quite definitely that three dozen females should be the maximum even for an outstanding male during the normal breeding season from January to August. For some males, on the other hand, a dozen matings would be ample. The experienced breeder will soon learn the capacity of a stud, and if the number of his queens is limited merely to the extent that keeps him fit and contented, there will not be much wrong. Perhaps it should be repeated here what has been said elsewhere with reference to the stud, namely that he must live where females cannot be a constant excitement to him.

During the breeding season he should be given a very generous diet which will build up his strength but not fatten him. Raw meat is excellent for this purpose, and a robust stud can manage 6 oz. as part of his daily menu. Meat, however, should never be fed exclusively, but must merely form part of a balanced diet.

The question is often asked as to the age at which a male sires his best kittens ; but although a variety of answers have been given from time to time, the truth is that there is no definite answer. Males have sired champion kittens when they themselves were anywhere between one and ten years old. As a general rule, however, a male is in his prime when he is about three years old, and that is probably the best time to seek his services.

Finally, one must always remember that the stud is not a wild animal, and he requires just as much grooming and general attention as any other cat. If you have a stud with matted coat, whose temper is also uncertain, he is not a good stud, and may be a danger both to the owner and also to visiting queens who do not appeal to him. If you own such a stud it might not be unfair to blame yourself for lack of care in his training. Most studs are very good tempered and enjoy a game with a bunch of well-grown kittens. The psychology of the male deserves the attention of the breeder, and understanding will produce far better results than ignorance.

Stud House, The

All stud cats need a separate house to themselves, and this should be well away from the dwelling house, as well as being out of sight of the houses where the females are kept.

A stud cat, particularly if he is a Siamese, can be a very noisy creature and a nuisance to oneself and the neighbours. Unfortunately it is often at night that he seems to be even more vocal than during the daytime.

It is only sound common sense to house him where he cannot see mature females, for some studs even grow thin and ill when they can see females whom they cannot reach. A dissatisfied stud frequently becomes a bad-tempered cat, and thus for him comparative isolation is a kindness.

In many respects his house can be the same as that used for females, but the active male needs the largest run that can be provided for him. His need for exercise, if he is to keep fit, is even greater than that required by females.

An essential fitting in the stud house is a double cage with a wire partition dividing it. This should be placed at a convenient height from the ground to permit the attendant to put the stud and the visiting queen in the separate compartments. The fixture is necessary because the stud and the female must be allowed to get to know each other before mating is attempted.

A wide platform built about 18 inches from the floor is also a wise precaution, as it allows the stud to get out of the way when the mating is complete.

Finally, there should also be a good solid piece of matting which can be firmly fixed to the floor for use when matings are to be attempted.

Sulphaguanidine

This is one of the sulphonamide drugs and can be of great use in bacterial infections of the bowels.

One finds cases in kittens when diarrhœa occurs and continues despite all the normal methods of checking this distressing symptom. Sulphaguanidine may effect a speedy cure. One would not recommend its use without the approval of the vet., but usually he is only too willing to agree to such a course when normal methods of treatment have failed to effect a cure.

Although sulphaguanidine is a poison, a comparatively small quantity of the drug is absorbed into the blood stream and this is quickly excreted through the kidneys. The doses which one would give to a cat are not sufficiently large to produce dangerous concentrations.

A three-months kitten, which is at an age when serious bowel infections can cause a disastrous setback, may be given a ½-gm. tablet four times a day for two days; two tablets a day for the next two days, followed by one tablet a day on the fifth and sixth days. By that time it should be quite clear whether this drug is the correct remedy for the particular case.

A vet's. prescription is needed if one wishes to purchase sulphaguanidine from the chemists. (*See Phthalylsulphathiazole.*)

Sunshine

Sunshine is essential for normal growth and development, and both fully-grown cats and kittens should be given every opportunity of enjoying it. It is the ultra-violet light contained in sunshine which assists all animals to develop Vitamin D in their own bodies. Vitamin D is known as the sunshine vitamin. Actually all daylight contains ultra-violet light, but the infra-red light which is warming is sometimes lacking. Sunshine contains both.

Although sunshine is of great value to cats one must always bear in mind the fact that too much heat does harm, and consequently in full summer, when the sunshine is particularly brilliant, shade must be provided.

An excess of sunshine also has a bleaching effect on the coat, and Blues and Blacks particularly lose their beauty of colour if subjected to direct sunshine for long periods. Provided that the animal is able to take the sun from time to time, and at other periods is sheltered from the direct rays, all the benefits will be obtained, and few, if any, of the disadvantages.

It would sometimes be particularly valuable in the winter to be able to subject cats to a tonic dose of artificial sunlight, but if this is done great care must be exercised to protect the animal's eyes. This may be achieved with a pair of goggles, but it is not every cat that will submit to this adornment. With furred animals much of the light provided by the mercury vapour lamp is lost as it does not penetrate through a thick coat, and can only seriously affect exposed skin. An attempt to provide a tonic by this method is, however, worth while with a cat suffering from debility.

Finally, one should realize fully the value of sunlight as a disinfectant. A combination of sun and air is far more efficient than anything one can buy in a bottle.

Swellings

See Abscesses.

T

Tabby Markings

Although it is obvious that the markings on a tabby cat must of necessity show many variations, there is, however, a general pattern which is considered to be the ideal.

The forehead should show a number of narrow but unbroken pencillings passing down the face and gradually converging towards the sides of the nose. The cheeks must not be clear, but should be covered with graceful whorls.

The chest must be crossed by two unbroken bands of colour, and sometimes a third is found at the base of the neck. This barring must also be shown on both legs, though frequently there is a tendency for some of these lines of colour to become too thick and thus to constitute a patch.

Almost oval markings on each shoulder, when combined with the markings at the top of the legs, present when regarded from above the appearance of a butterfly. Somewhat similar markings, although considerably larger, occur on the sides. The width of the colour rings on the sides is thicker than those on the shoulders.

A solid line of colour must run along each side of the backbone to the root of the tail. Sometimes these two lines become merged to make a solid back, but this should be regarded as a definit fault.

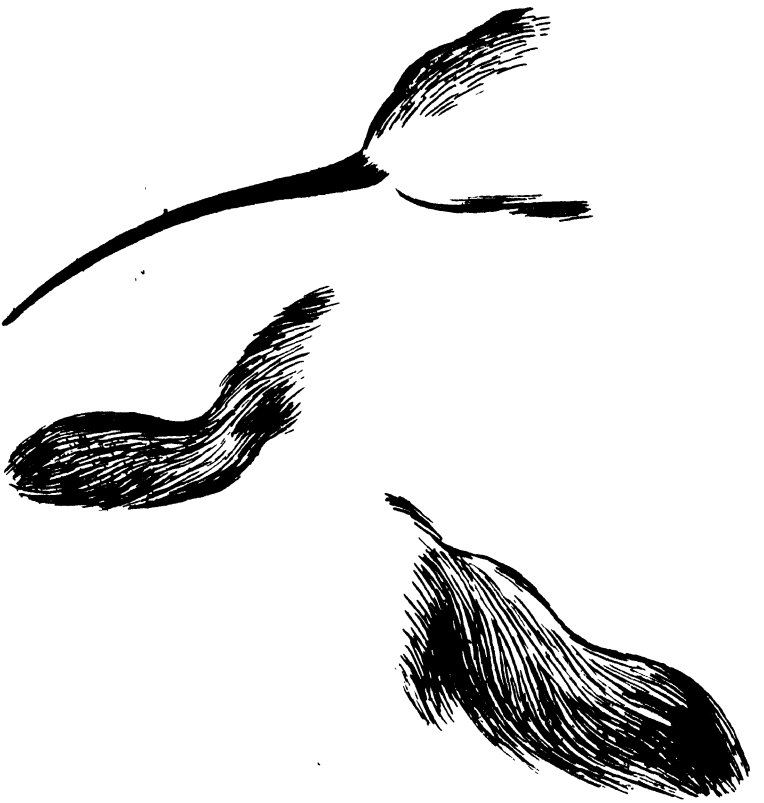
The flanks are also barred as in the case of the front legs, but the rear stripes will usually be wider.

Finally, the tail should be ringed from root to tip, where there should be a solid patch of the top colour. This, however, should not be larger than the normal width of a tail ring.

Although even spacing of markings is desirable it is but rarely found, but balance seems to be something which Nature achieves herself without much assistance from the breeder.

Tails

A good tail makes a very considerable difference to the appearance of a cat, although in actual fact the function of a tail has no connection with beauty.



TAIL TYPES

In Persians the tail should be short and bushy, in fact it should be similar in appearance to the brush of the fox. Of recent years another type of tail, which may be called the plume tail, has appeared. With this type the hair of the tail is similar in length to that on the body, and hangs somewhat similarly to the feathers on the tail plumes of an ostrich. This variety is not as attractive as the short, bushy type which the standard demands, and should certainly be bred out by selective breeding.

Tail carriage varies considerably, but most animals carry their tails upright when pleased. Some cats, however, never carry their tails in this upright position, and it is noticeable that this characteristic seems to have some hereditary significance, for it appears to be passed on from generation to generation.

Short-haired cats have tails which are considerably longer than those of the Persians. In English varieties there is no tapering towards the tip, but with Siamese a whip tail is called for. A whip tail is one which, although it is not broad at the root, gradually tapers until at the tip it is very slender.

The tail is one of the first parts of the cat to show the results of injudicious inbreeding, and a shortened and kinked tail sometimes appears as a sign of this practice. Although in the Siamese a small kink at the tip of the tail is allowed, in all other varieties it must be regarded as a definite deformity.

Tapeworm

See Worms.

Tartar

Tartar usually forms on the teeth of cats and if not periodically removed will cause trouble. When this tartar is soft bacteria will develop in the small pieces of decaying food which lodge themselves in it, and as a result the cat will almost certainly develop foul breath. If the matter is not speedily remedied the next stage will be inflammation of the gum. Tartar forming at the neck of the tooth causes the gum to recede and at the same time produces inflammation. The inflammation of the gums is at times so severe that the animal is constantly dribbling and may also find great difficulty in eating.

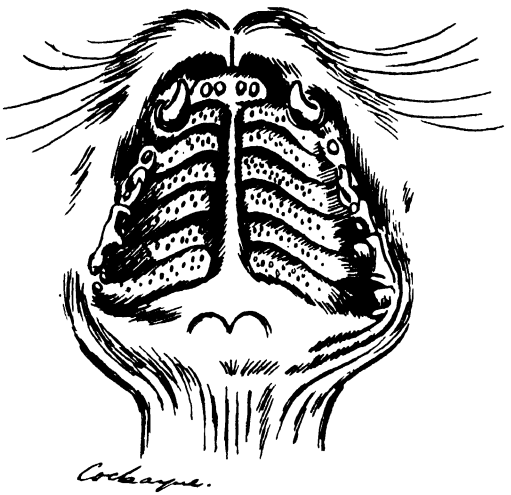
The only satisfactory remedy is periodic scraping with a blunt scraper. The breeder can attempt to perform this task himself, but unless he has considerable practice he may do more harm than good. When a number of cats are kept practise can soon be acquired, but with only one or two with which to gain experience the services of a vet. should be sought.

A mouth-wash should also be used after the tartar has been removed. Glyco-thymoline is excellent for this purpose and should be diluted with four parts of water.

Teething

A kitten starts to develop its first set of teeth when it is about a fortnight old, and in the course of a few weeks the milk teeth are complete. Of these there are fourteen in the top jaw and twelve in the lower. The first to appear are the incisors, and these are also first to disappear before the permanent teeth start to develop about the age of four months. It is usual for all these permanent teeth to be through the gums between the sixth and seventh month. Whereas the baby teeth are twenty-

six in number, the permanent teeth are thirty, with sixteen in the top jaw and fourteen in the lower. As this second set is the last that a cat will develop, it is essential that, as replacement is impossible, they should be kept in good condition.



THE CAT'S TOP JAW

One of the first signs that the permanent teeth are on their way is that the kitten finds more difficulty in eating its food than at normal times. One notices that the animal becomes clumsy when picking up the food from the dish. It may bite on one side of the mouth only, and perhaps drop a piece of meat several times before it is finally swallowed. When signs such as these are observed, the mouth should be carefully inspected, for there are many things that the breeder can do to ensure that this essential operation of developing teeth, which is always painful, is completed with as little discomfort as possible. The gums are usually inflamed, and often several of the old teeth will be found to be loose. When such loose teeth are found, it is only a matter of seconds to remove them. One must remember, however, that a cat's teeth are sharp, and a good deal of skill is required if one is to avoid a bite during this simple operation.

Some kittens, when teething, appreciate a hard object on which to bite, and a bone which will not splinter is most useful for this purpose.

Inflamed gums must also be bathed at least twice a day with a soothing mouth-wash. One can obtain a prescription from the vet., but most households have glyco-thymoline, and a solution of this mixed with four parts of warm water is definitely soothing. Although most cats are afraid of the smell of some antiseptics, few seem to object to glyco-thymoline.

Some kittens have a bad time when teething and rapidly lose condition. In such cases the breath is offensive and the kitten may refuse to eat. If, however, the inflammation can be reduced, appetite soon returns, but it must be remembered that all cats will refuse to eat if the process is painful. It is always a good plan to offer soft food to a kitten in this condition, and in bad cases it may be necessary for a few days to feed by hand.

Teething is frequently accompanied by some form of digestive disturbance, and it is important to see that the action of the bowels is well regulated at such times.

Occasionally a kitten develops fits during the teething process, and when that happens the vet. will usually prescribe bromide as a sedative. This rare trouble invariably disappears by gradual stages when teething is complete.

Teething is a perfectly natural process, and when the owner deals with small complications as soon as they appear, there is rarely any serious development. Minor discomfort is the worst that the kitten has to endure.

Telegony

Telegony is a mere superstition and yet it still persists. There are breeders even today who insist that if a cat is mismated it is ruined for the future breeding of pedigree stock, because they believe that this earlier misalliance will affect all future litters, and the kittens bred at this time will show signs of the earlier sire.

From the scientific point of view the matter is perfectly clear. The spermatozoa fertilize the ovum, which means that a male and female germ cell are united. These two cells, by division thousands of times, finally develop into a creature composed of millions of cells—the kitten. The male spermatozoa has no permanent effect upon the mother bearing the kittens, and she is rid even of its temporary influence just as soon as the kittens are born.

Some support may have been given to the belief in telegony from the fact that from time to time unexpected qualities appear in some of the kittens in a litter. For example, it is

not impossible for a Cream kitten to appear in a litter of Blacks. Investigation of the pedigree of both parents should, however, produce a solution of the apparent mystery. One would expect to find that there was a Cream ancestor on one side of the family tree, although it may well have been several generations back. In terms of colour it merely means that one of the parents was not pure bred.

A somewhat similar belief, for which also there is not the slightest scientific justification, is that if a queen is mated to the same stud on a number of consecutive occasions, the kittens of the later litters will take after the father much more than will be the case with the kittens of earlier litters. It would be most useful if this were a fact, but unfortunately from the point of view of genetics it must be regarded as sheer nonsense.

Temperature

The normal temperature of a cat is about 101·5° F., although with kittens it may be slightly higher, and in old animals generally a little lower than this figure.

With all animals excitement can cause a rise in temperature, although in practice one would rarely notice this because, as in other respects the cat would appear fit, the breeder would be unlikely to take the temperature. Naturally a rise in temperature for this reason would only be temporary and of no real significance.

It is when there is a rise in temperature, and at the same time the cat shows other symptoms of illness, that precautions have to be taken, with M & B 693 given as a safeguard.

To try to set out all the causes for a rise in temperature would be the work of a veterinary surgeon writing a medical text-book, but all cat breeders realize that there are a number of diseases of a serious nature whose onset is heralded by a rapid rise in temperature to several degrees above normal. Once the disease is fully developed, the temperature frequently stabilizes itself at a lower level, and then gradually falls back to normal as the infection is overcome.

The most hopeful sign in diseases heralded by a high temperature is an even rise and fall during the twenty-four hours. At the end of each period of twenty-four hours the temperature should be a little lower than it was the day before, and one can then feel that progress is being made. Where the fluctuations are wide and irregular, it is usually an indication that the disease has not yet been controlled and that the crisis has not been reached.

The higher the temperature the more restless the patient becomes, and in serious cases even the mind of the animal seems to be affected. Careful nursing for such cases is essential if there is to be a cure.

In many respects low temperatures must be regarded much more seriously than those that are high. For a cat to go up to 105° is certainly an indication of serious possibilities, but there is still every chance of recovery, whereas a fall of similar extent could almost certainly be regarded as fatal. Low temperatures below 99° are usually signs that collapse is near, and a vet. would certainly regard the situation as one needing immediate and drastic measures.

Although temperature is indicative of an animal's general condition, there is no need to regard the thermometer as an instrument which should be brought into daily use in the cattery. It can be a good servant to the intelligent, but a bad master to the nervous owner who is always expecting illness among his cats.

Temperature Taking

In case of suspected illness it is most important to take the cat's temperature, for this will usually give a clear indication of whether there is some physical trouble which needs attention.

The most accurate reading can be obtained by inserting a clinical thermometer in the rectum, but this usually needs two people, one to hold the cat and the other to insert the thermometer. Before being used the mercury end should be well smeared with vaseline. The length of time taken for the reading depends upon the type of thermometer used, but when a fair quantity of vaseline has been used it is wise to allow a minute in the case of a half-minute thermometer.

One can also obtain a reasonably satisfactory reading by holding the thermometer for several minutes under the animal's front armpit. In this case, however, one degree should be added to the reading shown, as the external temperature, particularly when the skin is covered with fur, is somewhat lower than that obtaining inside the body.

Thinness

See Anæmia and Bad Doers.

Tortoiseshell Persians

Although Tortoiseshell cats are a most interesting variety, there is not much that can be said about their breeding, as generally speaking they are produced by intelligent cross-breeding. The

three colours required in the Tortie are black, red and cream, and it is by mating the self colours that the Tortoiseshell is produced. Even so it must not be supposed that the mating of a Black male with a Red female, and then the F.1 generation to a Cream male, will mean that a Tortoiseshell is bound to appear in the offspring. Chance seems to play a big part, and many experiments may be necessary before success is achieved.



TORTOISESHELL
PANOXA

As will be seen from the suggested reading list in the section dealing with colour breeding, more attention has been paid to the Tortie than to any other variety. Possible results from various matings are often given in the accounts of these researches, but it must be recognized that the results which one expects are only true when a large number of kittens are produced from many different matings. Some breeders try for years to produce a Tortie, while the fortunate few are successful at the first attempt.

A Tortoiseshell is a patched cat and not one in which the three different-coloured hairs are indiscriminately mingled. As

far as possible the patches should show no sign of brindling, and the hair in each patch should be of one colour only. The ideal cat will show a considerable number of patches, and there will be no impression that one colour is predominant. In practice one often finds a Tortoiseshell which shows black patches which are too large, and thus one loses the effect of the three colours.

Brightness and density of colour are most important, and in this respect many cats fail, particularly in regard to red. A dull brown of lightish colour is common but undesirable.

The standard does not mention a blaze in the case of the Tortoiseshell, but breeders as a whole seem to favour such a marking. This should run in a straight line from the nose upwards and may be either red or cream in colour.

Solid coloured legs are not required, but it is not easy to produce the ideal in which the legs are also well split up with colour.

Tortoiseshell males are extremely rare and when they do appear are usually found to be sterile. There is, however, a full record of the progeny of one Tortie male.

As Tortoiseshell males cannot be used, the females of this variety have to be crossed with males of other colours. It is usual to choose a male of one of the self colours shown in the coat, and the consequent litter is likely to show a majority of self-coloured kittens, Black, Red and Cream and occasionally one Tortoiseshell female. There can, however, be no guarantee that a Tortoiseshell female will be produced, for some queens never reproduce their own variety even when mated to a number of different males. For this reason the number of Tortoiseshells is always small.

The ideal type is that of the Blue, but as all the males which are used for crossing will not possess this outstanding type, it is only rarely that a Tortie will be bred which will excel in type.

This, then, is a variety which may be used for a good deal of experimental work in colour breeding, and should prove extremely popular with breeders who are interested in the subject of colour inheritance. If such breeders would pool their experience much might be learned which would make future breeding less a matter of chance.

(*This section was written with the help of notes supplied by Mrs. Axon.*)

OFFICIAL STANDARD

Colour : Three colours, black, red and cream, well broken into patches ; colours to be bright and rich and well broken on face.

Coat : Long and flowing, extra long on frill and brush.

Body : Cobby and massive, short legs.

Head : Round and broad, small, well-placed and well-tufted ears, short broad nose, full round cheeks.

Eyes : Large and round, deep orange or copper.

SCALE OF POINTS

Coat	50
Body	15
Head	20
Eyes	15
	100

Tortoiseshell and White Persians

The only difference between the Tortoiseshell and Tortoiseshell and White is the addition of white to black, red and cream.

Thus there are now four possible patches instead of three, and an opportunity for greater distribution. The standard does not ask for any special placing of the colours, but convention expects that there shall be a certain arrangement. Whereas in the Tortie the blaze may be red or cream, in the Tortie and White it should definitely be white. White is also expected on the feet and legs, and the appearance is improved when the chest also bears a white patch. It is most important that tabby markings should not appear.

With any animal which has white in the coat there is always a danger that white hairs will appear in the coloured patches. This is a fault, and every attempt should be made to avoid breeding with animals which fail badly in this respect.

A good Tortie and White is a very beautiful cat, but it is not every breeder who is successful in breeding one, as chance here again seems to play a far larger part than science.

Josie, a Tortoiseshell and White female belonging to Mrs. Axon, showed in her litters the interesting possibilities when breeding with this variety.

When mated to a Black, Champion Son of Jester, Josie produced two Tortie and White females, both of which were winners. Later, when she was mated to a Blue, Starlight of Mockbridge, her litter contained a Blue-Cream, a Black and White, a Tortie and a Tortie and White. The last, Noxina, became a full Champion.

With both Torties and also Tortie and Whites it is very difficult to pick out a kitten as being either useless or of outstanding



TORTOISESHELL AND WHITE
CH. NOXINA

quality, for blue in a kitten may quite easily become a deep black in an adult. The real quality of animals of these two varieties cannot safely be assessed until the adult coat has developed.

Orange or copper eyes must be possessed by cats of both breeds.

(*This section was written from notes supplied by Mrs. Axon.*)

OFFICIAL STANDARD

Colour : The three colours, black, red and cream, to be well distributed and broken and interspersed with white.

Coat : Long and flowing, extra long on brush and frill.

Body : Cobby and massive ; short legs.

Head : Round and broad, small, well-placed and tufted ears. short broad nose, full round cheeks.

Eyes : Large and round, deep orange or copper.

SCALE OF POINTS *as for* " Tortoiseshell Persians " *above.*

Toys

All kittens like toys with which they can play, and the games of kittenhood sometimes even amuse old and mature cats. Obviously articles which will amuse and will at the same time give exercise serve a useful purpose, but care must be taken to see that none of the toys provided is dangerous.

One of the safest of toys is a table-tennis ball which, with its rapid movement, will amuse a kitten for a long time, even until its abundant energy is temporarily exhausted. A ball of crumpled paper will serve the same purpose, but it does not provide an equal interest because it cannot be moved so rapidly over the floor when buffeted by a paw. A ball of paper suspended by string will keep a kitten contented for a long time. All these toys are very simple, but they allow the kitten to develop that quickness of movement which normally it would develop by chasing moving objects out of doors.

Balls made entirely of soft wool or rubber should not be used, as it is more than likely that the animal in its play will bite off pieces which may be swallowed with unhappy consequences. For the same reason painted articles should be avoided, as a kitten plays almost as much with its mouth as it does with its feet.

A kitten will certainly want to play if it is fit. It is, therefore, much wiser to provide toys rather than leave the animal to find playthings for itself. A kitten unfortunately has no sense of either monetary or sentimental value.

Cats are particularly attracted by the smell of catmint, and from their point of view a cloth ball stuffed with the dried stems and leaves of this plant is a plaything with an additional interest.

Many other toys can be conjured up by the mind of the ingenious, and a little thought and labour expended in this way soon provides its own reward with the obvious pleasure of the kittens.

Transfer

See Registration and Transfer.

Trapping of Cats, The

If one lives in the country there is always a danger that cats which are allowed complete freedom may get caught in rabbit traps. The danger is so real that if one is in a neighbourhood where much trapping is done, the only safe plan is to prevent the animals from straying too far. In normal times it is neither difficult nor expensive to wire in a large part of the garden in which the cats can have ample freedom in the fresh air and

yet be unable to escape. As a cat can quite easily run up 6-foot netting, and just as easily get down on the other side, extra precautions have to be taken. To each upright on which the wire is fixed a batten must be nailed at an angle of forty-five degrees pointing upwards. To these extra supports 2-foot netting can be fixed, thus forming an angle of netting over which the cat cannot climb.

It is very rare for a cat to strangle itself in a snare, for usually, if caught by the neck, the pain caused by movement persuades the animal to remain quiet until it is rescued. When, however, a leg is caught by the noose, the cat struggles and the leg is strained even if it is not badly cut.

By far the most dangerous trap for small animals is that which has toothed jaws which snap together. The spring controlling these jaws is usually so strong that the leg is almost certain to be badly lacerated.

Unfortunately, the fact that these methods of catching rabbits are not generally popular does not prevent their use, and the cat owner must take his own precautions.

Gamekeepers are reputed to shoot cats on sight, and although this is no doubt a gross exaggeration, it would certainly be most unwise to allow a cat to run loose in any place where one knew that game was preserved.

Travelling

See Rail Travel.

Travelling Boxes

See Baskets.

Tuberculosis

Tuberculosis is certainly not a common disease among cats, yet it occurs sufficiently frequently to warrant a separate section. The first important point to remember is that this complaint is definitely contagious, and thus, as soon as the diagnosis is confirmed, the affected animal should be destroyed so that other animals of the cattery may not be subjected to the risk of infection. There seems to be a doubt as to whether human beings can contract the disease from a cat, but the risk is too great to be run, especially where there are young children.

Unfortunately tuberculosis is difficult to diagnose in its early stages, as external symptoms of a definite character rarely occur until some months after the disease has been contracted. Cats which are unthrifty, and whose appetites are uncertain, should

always be suspect unless old age with its ills can be considered a likely cause for the condition. When the disease has fully developed, there is usually a rise of temperature, but this is only slight and in the morning may even be normal. The coat of tuberculous animals is usually rough and staring, and conveys the impression that something is wrong with the general health.

It is at this stage that veterinary help should be sought, for accurate diagnosis is not possible for the amateur. The dropping of ophthalmic tuberculin into the conjunctival sac of the eye will usually provide positive proof of the disease within twenty-four hours. This test will be carried out, of course, by the vet.

In the later stages of the disease, one or both eyes are usually affected, and blindness may result. The white streaks which appear across the eye are signs of tuberculosis of long standing, at least for a period of five or six months.

The idea that a cat with tuberculosis must definitely have a harsh, dry cough is entirely wrong, for it is but rarely that the lungs are affected. Practically any part of the body may be attacked, and even in the early stages, the mesenteric glands will be found to be considerably enlarged. In some cases they can be felt quite distinctly with the fingers.

As cure of the disease is impossible, or at least too dangerous to consider, attention must be concentrated on its prevention.

Obviously the more natural the life the cat is allowed to lead, the smaller the risk of contracting this complaint. Animals which obtain an abundance of fresh air and sunshine build up a natural resistance to most diseases. Fresh air and sunshine may certainly be regarded as specifics.

Tuberculosis may obviously be conveyed to cats through milk given by tuberculous cattle, but in these days of controlled milk and the fact that most cows are tuberculin tested, the risk is very small. There is, however, definite danger when feeding raw meat which has not been passed fit for human consumption ; a danger which may be almost entirely eliminated if such meat is well cooked before it is used.

Tumours

Although in old age it is not at all uncommon for cats to develop tumours, fortunately few of them are of a kind likely to cause the animal either pain or inconvenience. For this reason, apart from the fact that such growths may be unsightly, there is little need to do anything about them.

Tumours are of two main types, benign and malignant. It is the former which causes little or no distress, while the latter,

usually in the form of a cancer, causes great pain in the later stages of its development.

It is quite simple to distinguish between a tumour and an abscess, for although both may feel hard to the touch there is always obvious heat and soreness with the abscess. Rarely do tumours cause heat, not even those of malignant type when they are far advanced and probably discharging blood-stained pus.

The commonest form of benign tumour is found in one or more of the mammary glands in old queens. The probable cause is careless treatment when the queen was nursing her families. Tumours of a similar kind may also be caused by a heavy blow on the soft surfaces of the body.

There are few parts of the body in which a tumour cannot develop, but in practice they are usually found in the throat, stomach and intestines.

In the case of a malignant tumour there is practically no hope of recovery, and painless death is the happiest solution. With this type there is often quite rapid wasting of the body. Emaciation which cannot be explained by the breeder is a condition which requires professional advice. Diagnosis, aided in these days by radiography, will probably permit the merciful destruction of the cat in hopeless cases before the period of pain begins.

Probably not more than one cat in twenty ever suffers from any form of tumour, and one need not therefore be unduly alarmed at the sight of every small swelling which may appear on the cat's body.

U

Ulceration

See Eyes and Distemper.

V

Vegetables

See Feeding.

Vitamins

Not so very long ago it was fashionable to deal with the subject of vitamins, but there seems a tendency today to label as a crank any person who is concerned with this matter in animal feeding. If the diet given to animals were properly balanced there would be no need to consider this subject in any detail, but for the average cat keeper the term " balanced diet " itself needs explanation, and this cannot be done without a definite knowledge of vitamins and the sources from which they can be obtained.

Certain facts on the subject of vitamins must now be accepted without question, for the proof has been provided time and time again as a result of laboratory experiment, and by research workers whose studies were carried out quite independently of each other.

The first fact is that no animal can be healthy unless an adequate supply of these complex substances is provided in the normal diet. Growth is definitely dependent upon the presence of certain vitamins in the body, and the animal is quite incapable of reproduction if other substances are denied to it. Experiment over a number of years has enabled the scientist to isolate such substances, and also to estimate their particular function in the animal's development. It would be quite untrue to say that the whole problem of vitamins had been solved in relation to their importance to living creatures, for as the years pass fresh facts are brought to light, but it is true to say that present knowledge is adequate to enable the breeder to see that the physical needs of his stock are provided for, if he will merely take the trouble to ascertain those facts.

Vitamin A

This is necessary for growth. If the diet is deficient in Vitamin A it is quite probable that there will follow eye troubles,

and also weakness leading to disease of the respiratory system, while it is also certain that the kidneys cannot function normally. Vitamin A is found in abundant quantities in several varieties of fish, the more common of which are cod and halibut. Carrots are very rich in this substance, and green vegetables also contain it in sufficient quantity to be useful. Yolk of egg may also be used to provide Vitamin A as an alternative to the other foods mentioned.

Vitamin B1

This is sometimes known as the nerve vitamin, although it has several other roles to play in the normal functioning of the body. When B1 is lacking the animal usually shows little sign of appetite, whereas a definite dose of this substance will usually produce appetite in an animal which has lost it as a result of illness and consequent debility. Normal growth cannot take place in the absence of B1, and this fact is not surprising as it has a vital part to play in normal digestion. It is quite possible that the bacterial infection of the bowels, quite a common ailment of kittens, may be due to the deficiency of B1. Wheat, milk and yeast are rich sources of B1, and some or all of these foods usually form part of the cat's dietary.

Vitamin C

Little is known about the need for a supply of this vitamin for cats, as it seems probable that they are capable of providing it for themselves. It plays a prominent part in maintaining a healthy condition of the skin, and is essential if the health of the gums is to be maintained. It is to be found in fruit juices, particularly those of the citrus fruits, and is also abundant in fresh, green vegetables. Proprietary substances such as Virol contain ample supplies of this vitamin if the animal shows signs that it is not producing itself the small quantity required for the maintenance of health.

Vitamin D

This is the sunshine vitamin, and animals can produce it within their own bodies if they are subjected to sunlight or any form of ultra-violet light. It must form part of the animal's food if there is to be assimilation of those mineral substances chiefly concerned in bone development, namely phosphorus and calcium. When the diet is deficient in Vitamin D, and at the same time the animal is deprived of direct daylight, there is usually a marked tendency to rickets. If the deficiency is prolonged in young animals the bones become deformed, and a

history of tooth trouble is also started. The most valuable source of Vitamin D is fish oil, particularly that produced from the liver of the halibut.

Vitamin E

It is only comparatively recently that the value of this substance has been recognized in cat breeding. Unless some Vitamin E is supplied, the animal will be sterile, and if the quantity is insufficient the animal is likely to be a poor breeder. The most useful form for the cat breeder is to be found in the wheat germ, and oil manufactured from this can be purchased in capsule form. Large quantities of the vitamins are rarely needed except in cases of illness which has resulted from earlier deficiencies and normally two 3-minim capsules each week for both males and females during the breeding season will be adequate to ensure that their powers of reproduction are good.

For most breeders a synthetic form of Vitamin E called Ephynal will be found even more useful than Wheat Germ Oil itself. (*See Benerva Compound, Halibut Liver Oil, Sterility.*)

W

Washing

See Baths.

Wasp Stings

See Bee and Wasp Stings.

Water

Water is so important that it needs special mention, particularly as some cat owners never provide it.

Many cats like milk, but all cats like water, so, even if milk is given each day, fresh water must be available at all times. An animal may or may not drink the milk which is put down for it, because at times it grows tired of foods with a distinctive flavour when given to it day after day. Water, on the other hand, has no definite flavour and therefore it is never unacceptable.

Cats which are to be fit must take plenty of liquid, for it is the water content of the body which, among its other functions, removes the waste and toxic matter from the system. It is not at all unusual for a grown cat to drink half a pint of water in the course of twenty-four hours if no other liquid is provided.

The cat is a most fastidious eater and drinker and will insist that the water is fresh. It is thus advisable to put down a small enamel bowl of water in the morning, and to replace the water with fresh towards evening. If you notice your cat apparently going for a drink of water and then turning away without drinking, that is a fairly sure sign that a fresh supply is needed. Tepid water is most unpalatable, and thus if the bowl is kept in a warm room or the weather is particularly hot, it should be refilled more frequently. A little care in such matters will be well repaid in the condition of the cat.

Weaning

Breeders show a divergence of opinion as to when the weaning of kittens should be started, and it must be admitted that while much is to be said for starting to feed the kittens when they are three weeks old, there is probably an equal volume of evidence

to show that the later the weaning starts the better it is for the kittens.

It may be helpful to consider this matter from two points of view. In the first place it is accepted as a fact that no two queens are alike in their ability to feed the litter. It sometimes happens that the kittens in a litter of two look poorly nourished, while those from a litter of seven are larger and apparently better fed. Obviously, therefore, if the kittens do not make satisfactory progress on their mother's milk, this should be supplemented as soon as possible.

Secondly, one must regard this subject from the point of view of the strain imposed upon the nursing mother. If she is a good queen one naturally hopes to obtain two litters from her in the course of the year. This is only possible if the drain upon her strength has not been too severe while rearing her first family. If she has lost weight and is clearly run down when the kittens are taken away, a period of months may be necessary before she is again in breeding condition. If this happens it may be so late in the year that, as has been said elsewhere, it would not be wise to plan a family which would arrive late in the autumn.

Perhaps when all the various considerations have been weighed, the decision will be that it is wise to start the weaning process at the end of the third week to husband the resources of the mother. With care the kittens should not suffer from this early start. It must, however, be fully realized that the kittens themselves are to decide the rate of progress, for if forcing methods are adopted the result can only be unsatisfactory.

The idea behind early weaning is to save the mother from some of the strain, but it is probably wise that she should continue to feed them until they are at least six weeks old.

The first feeds must naturally be liquid and as near an approach to the mother's milk as possible. In normal times there are on the market a number of scientifically blended milk foods which are specially prepared for animals. One of these should be tried to see if it is suitable. Kittens are very similar to human babies in that the same food does not suit them all. If Lactol or Martinmilk are found not to be to the liking of the kittens, or seem likely to cause a digestive upset, there are many infant foods which may be tried. There is, however, no intention to make it appear that the finding of a suitable food is difficult, for in practice that is rarely the case.

Fresh milk may be used, but it is rarely satisfactory as there is often a daily variation in its quality. The best natural milk



A GLIMPSE OF THE PAST

A FAMILY OF 1912

is that of the goat, but there are few breeders who have a supply readily available. Cow's milk cannot be recommended as so often it leads to trouble, and this leads one to the conclusion that for pedigree kittens it is best avoided. The main difficulty is that the cat's stomach is so constituted that it is able to deal with concentrated foods, but cannot adjust itself to bulk with low nutritive value.

Some kittens do extremely well on evaporated milk which is fed to them without any dilution. The only drawback with this is the consistency, which makes it almost a semi-solid food which adheres to the kitten's mouth. Water should not be allowed immediately after such a meal or one will lose the concentration, and suffer the same disadvantages as if ordinary cow's milk had been provided.

When starting young kittens to feed one should never pour the liquid into their mouths. They must take the food themselves because they like it and want it.

If the kittens are only three weeks old the mother will be spending quite considerable periods away from them in the course of the day, and it is when she has been away for an hour or more that the first attempt at feeding should be made. Kittens which have just finished feeding from the mother will show no interest at all in any food that is offered them.

Whatever is to be fed must be brought to blood heat, because that is the temperature to which they are accustomed. A spoon can hold the liquid, and this should be presented to the kitten. It is likely to show no interest at all, but if the lips are moistened with the milk it will lick and thus obtain the first taste of the food. Then, if it is hungry and interested, it will try to obtain more and may lick a little from the spoon. At a first attempt with a family of four it is probable that only one kitten will feed itself, but with patience all will be lapping from the spoon in the course of a few days.

Naturally the quantity given will at first be very small, and for the first few days should not exceed a teaspoonful a day. This may be given in two feeds, and it is very rarely that a full teaspoonful of this artificial food will be consumed at one attempt.

After three days an effort may be made to persuade the kitten to lap from a small saucer. It may be necessary at first to dip the kitten's nose gently into the liquid, but great care must be taken to see that the animal is not frightened. Fright will certainly retard progress, and it may be several days before the kitten regains sufficient confidence to make another start. When this supplementary feeding has continued for ten days, the

quantity given each day may be as much as three teaspoonfuls divided into two meals, and by this time the kitten is ready to attempt something a little more solid. Some appreciate a small quantity of scrambled egg which, if not made too liquid, rarely causes any sign of diarrhœa. There are kittens, however, which will not look at egg, but enjoy a breakfast cereal, particularly the malted varieties, to which milk and sugar have been added.



BROWN TABBY KITTENS

Towards the end of the sixth week an excellent meal can be made with boiled tripe which, after cooking, has been cut into small pieces. Rarely is any trouble experienced when feeding this, and it seems also to help with the digestion of other foods. Steamed fish is also valuable, but it is not every kitten that will eat it; in fact, the idea that cats are passionately fond of fish is not supported by experience. Coarse fish such as cod is rarely appreciated by any kittens, but some soon develop a partiality for plaice. Finally, during the seventh week rabbit may be added to the dietary. It must be well boiled until really tender, and then cut into small pieces. It should not be minced, but the pieces ought to be large enough to compel the animal to bite its food. Cats do not masticate, but if the pieces need to be broken up by the teeth, one of the greatest faults of kitten feeding, namely " bolting their food ", is avoided.

By the time they are seven weeks old they can be gradually introduced to all those articles of diet which are eaten by adult cats, provided that one remembers that all new foods must be introduced in only the smallest quantities, and the kitten's stomach gradually accustomed to them. All new food should first be added as a small portion of a meal which is known to cause no trouble, and then the quantity can be gradually

increased. Serious consequences often follow changes in diet which have been made injudiciously.

A kitten should never be allowed to eat as much as it wants to eat, but a maximum quantity must be fixed, and even the remainder of that should be removed if the kitten even for a moment loses interest in it. It is far more dangerous to overfeed than to do the reverse. If there is always a keen appetite at meal-times there will not be much wrong.

During this seventh week the queen should be kept away from her kittens all day, and only be returned to them at night. In this way the meals can be equally spaced over the day from about seven in the morning until nine at night. Four meals are adequate at 7, 12, 5 and 10, and of these the first and third will be milky foods, while the other two will be meat meals in some form or other.

By the end of the eighth week the kittens are quite capable of eating for themselves without any assistance from their mother. They are now completely weaned.

There are a number of additions to diet which may definitely prove beneficial. The first of these is limewater. If limewater is added to the milk in the proportion of one teaspoonful to a cup full of milk, it will greatly assist sound bone formation.

From the end of the first month, if the kittens are not able to spend part of their time in direct daylight, Halibut Liver Oil and some source of Vitamin B should be provided, as has been suggested in the section on Autumn Litters.

It is in the rearing of kittens that the breeder will make or mar his hobby. It demands a skill and understanding which may be helped by what one reads of the efforts of other breeders, but the only real road to success is practical experience.

Welfare Societies

There are a number of welfare societies up and down the country which are doing excellent work in their care for all varieties of animals, but there is only one society which devotes itself entirely to cats. This is " The Cats' Protection League ".

Its objects are clear, and the work which it has done for many years gives it a definite claim upon the sympathy and material support of all cat lovers.

It seeks to promote a better understanding of cats, and for this purpose is untiring in its efforts to educate cat owners. A number of leaflets have been issued with this object, and a small monthly magazine, " The Cat ", is one of the oldest papers devoted to cats and their welfare.

Some idea of the work performed by the League in a normal year can be realized from the fact that in the twelve months just before the war nearly a thousand patients were treated at the clinic or by the staff visiting sick animals, and fifty thousand educational leaflets were distributed.

Membership of the League costs five shillings a year, but there are many other ways in which help, both financial and humanitarian, may be given.

Most people realize the need for such work, but many " would-be " helpers know nothing of such welfare associations.

A letter to the Secretary, The Cats' Protection League, 29, Church Street, Slough, Bucks, will provide him with an opportunity of explaining both the work and needs of this most necessary society.



WHITE
KELLYTHORPE CHINA CHIP

White Persians (*by Mrs. A. H. Cattermole*)

There are two varieties of White Persians. There is the blue-eyed variety and another with orange eyes. One frequently meets with Whites with odd eyes, one blue and the other orange, but this is not a recognized variety.

The colour must be pure white without any trace of yellow, and it is essential that the coat should be devoid of all markings. As with all Persians, a long, flowing coat is expected, with a full frill. This, when finished off with a short, broad brush, makes a cat of most attractive appearance. The texture of the coat should be soft and silky.

The body in the ideal cat is cobby with plenty of bone, but there must be no trace of coarseness. The legs should be short,

and such a cat, when in full coat, should be very close to the ground when walking.

The head must be round and broad with considerable width between the ears. A broad skull tapering off to a weak chin is definitely a fault, and the muzzle should be characterized by strength. The ears must be small and well covered with fur, and in the first-class specimen good tufts will make the ears appear even smaller.

Eyes of a deep sapphire blue should be large, round and wide open. With the orange-eyed variety depth of colour adds much to the beauty of the cat, and there must be no trace of a green rim to the iris.

Although one may have a very clear impression of the qualities of the perfect animal, much patience is needed if one is to breed an animal which approaches the ideal. The wisest plan for the beginner is to purchase the best female he can afford, but immediate success must not be expected. I have often found that the kitten which shows the greatest promise does not always develop into the best adult, and the novice must be prepared for many disappointments. Right feeding, and an ideal environment, both play a big part in the development of the kitten into the adult.

One point I must stress when considering the purchase of a blue-eyed kitten. If the eye colour is not good one can be certain that in the adult it will be even worse, for blue eyes definitely pale as the kitten grows older. The reverse is usually



WHITE

CH. LOTUS SUGAR CANDY



WHITE

CH. RAYMEAD BLUE EYES

the case with the orange-eyed Whites, for here the colour may deepen until the cat is quite two years old.

Newly-born White kittens seem to be almost bare of fur, but within a few days one can see a definite change in the appearance of the coat. It is a strange fact, but one which I have noticed often, that these kittens which are born practically naked often carry the fullest coats when they are adult.

One of the slight disadvantages with White Persians is that sooner or later they develop what is known as a " greasy tail " which, if neglected, gives the tail a definitely yellow appearance. This fault, however, can be remedied by washing with soap and water in which borax has been dissolved. After washing dry carefully and give a good dusting of powder.

Litters of blue-eyed Whites are not very large as a rule, and four is considered as being very good. In experience I usually find that if there is a large litter several of the kittens soon fade away. It would almost appear that there is some lethal factor in the genetic make-up of the blue-eyed White. The orange-eyed variety, however, is usually a much more prolific breeder.

Whites with orange eyes can be cross-mated with a Blue male. This mating not only improves eye colour, but also transfers to the kittens some of the characteristic type qualities of the Blue. The position is very different when a blue-eyed White is

crossed with a Blue male, for, although type may be improved, eye colour is certainly lost. If there is to be any hope of regaining the blue eye, female kittens from this mating would have to be back crossed to a blue-eyed White male. Speaking personally I have not found these crosses very successful.

The late Mr. House recommended crossing with a Cream male, but here, too, one is again confronted with the difficulty of eye colour.

When breeding blue-eyed Whites one can never be sure at six weeks what colour eyes will develop, apart from the fact that a kitten with dark sapphire eyes will retain them. A very pale blue eye may finish by being green, and although green-eyed Whites do occur, they are not a recognized variety. Odd-eyed kittens may appear in a litter when one least expects them. Even when the same male is mated to the same female year



WHITE

CH. LOTUS MOLIERE

after year, I find that the same eye colour does not appear in all litters. It may be tantalizing, but this variation is certainly interesting.

Some blue-eyed Whites are deaf, but a good many of them have perfect hearing. Breeders have tried hard to breed out this disability, and their success has been considerable. Sometimes one is compelled to breed with mediocre specimens whose hearing is perfect in an attempt to cure this fault. Eventually, perhaps, complete success will be achieved. Even deaf cats, however, seem to be able to compensate for the defective quality or complete loss of this sense by being particularly sensitive to movement and vibration. Blue-eyed Whites are certainly very intelligent.

Many people like White Persians, but are afraid to keep them because they so easily get dirty; at least, white shows dirt more than the darker colours. Dry cleaning Whites with powder is not difficult, and it is really remarkable how the whiteness of the coat can be retained even in London, where I live and keep my cats. Talcum powder, Fuller's Earth and French Chalk are all useful cleaning powders, but one must be very careful to see that none of the powder gets into the eyes.

In the past there have been some very beautiful White Persians, and no doubt the future will produce many more specimens of outstanding quality.

During the years before the war there were some Whites which were really worthy representatives of the breed. To mention them all would occupy too much space, but the quality of such cats as Champion Minley Roseacara, Champion Sensation of Hounslow, Champion Lotus Billy Boy, Champion Casino Luck, and the orange-eyed White, Kellythorpe White China, will long be remembered. New breeders with patience may achieve similar successes as the owners of these cats, and I wish them the best of luck in their endeavours.

OFFICIAL STANDARD

Colour: Pure white, without mark or shade of any kind.

Coat: Long and flowing on body, full frill and brush, which should be short and broad; the coat should be close and soft and silky, not woolly in texture.

Body: Cobby and massive, without being coarse, with plenty of bone and substance, and low on the leg.

Head: Round and broad, with plenty of space between the ears, which should be small, neat and well covered, short nose, full cheeks and broad muzzle.

Eyes : Large, round and wide open, deep blue in colour.

N.B. : Whites are very liable to get yellow stains on their tails from accumulated dust, etc. This very damaging peculiarity should be carefully attended to and stains removed before showing.

SCALE OF POINTS

Colour	25
Coat	20
Body	20
Head	20
Eyes	15
	100

The official standard for the orange-eyed White is the same as the above except for eye colour, which must be copper or deep orange.

Worms

If breeders really understood the serious consequences which may follow a bad infestation of worms in kittens they would do something to prevent this state of affairs. So many breeders seem to assume that their cats cannot possibly be hosts to worms, and therefore rarely take the trouble to investigate the matter. It is only when a serious illness or death has followed upon their own neglect that they act, and then often more precipitately than wisely.

Probably most cats and kittens have worms from time to time, but the stamina of the animal and the normal functioning of the bowel ensure that such worms are expelled normally from the body and no serious accumulation is produced.

Kittens which are reared in outside catteries, and which therefore do not come in contact with garbage or decayed food, can rarely be infected except by the mother. For this reason breeding queens should receive periodic doses of worm medicine. The trouble is that many breeders are convinced that their methods are so careful that the cats must be immune to the trouble. This idea is usually quite false, and proof is found later when a litter of kittens is seen to be infested. The best time to worm a queen is about a fortnight before she is sent to be mated. As most queens are fairly regular in their calling it is not difficult to choose a suitable time. Probably little harm would be done if a queen were wormed during the first fortnight

of pregnancy, but the upset caused by the medicine is not to be recommended even at this early stage. After the first fortnight such methods would be definitely dangerous and might cause the loss of the litter.

It must be perfectly obvious that the safest time to use worm medicine is when an animal is quite fit. If one waits until there is debility and perhaps even gastritis the chances of recovery are much less.

Wisdom, therefore, dictates that adequate measures should be taken to prevent worm infestation, and the trouble thus taken will be amply repaid. The many ways in which the cats can become the host to these parasites are so varied that it is only prudent to assume that one's own animals are likely victims.

With kittens attempts at cure are always fraught with danger, and it is a wise rule which says that kittens under four months should not be wormed. Unfortunately such a counsel of perfection is not always possible in practice, for a kitten may be so emaciated, and its condition obviously deteriorating, with the result that desperate remedies must be attempted. If a kitten under four months has to be given medicine as a matter of life or death, the only sound policy is to consult a vet., who will make up a dose which he considers the debilitated state of the animal will be able to tolerate. Even if sentiment plays no part in the decision, the fee that will have to be paid is far less than the value of the kitten.

A kitten that is suffering from worms usually possesses a ravenous appetite and seems almost unable to wait until the regular feeding time comes round. It is also usually prepared to eat far more than is good for it, and yet apart from a distended belly, it shows little advantage from the food eaten. It carries little flesh on its body and the ribs are poorly covered. Usually there is a falling away below the backbone and this is accentuated by the distention of the belly. The coat is lank and without lustre and frequently the eyes are dull.

When such visible signs of " bad doing " are noticed careful watch should be kept on the motions, and it is more than likely that proof of one's suspicions will be found. The motion of cats harbouring worms is frequently covered with a substance of jellylike consistency and appearance. In the absence of knowledge of any other probable cause one may act on this.

Normally the worms are confined to the intestines, but when there is bad infestation they may find their way into the stomach from which they are later vomited. This may be a serious symptom, for it is at times the precursor of gastritis. Whatever

the age of this kitten such signs should always be taken as an indication of the need for immediate action.

The worms which infest the intestines of the cat are usually of one of two types, but occasionally both varieties will be found to be present at the same time. By far the more common variety is the round worm (*Ascaris Marginata*), but the tape worm (*Tænia Solium*) is by no means rare.

There are a number of proprietary medicines on the market, but the breeder would be well advised not to use any of them until he has ascertained the ingredients of the tablet or powder. Santonin is an excellent vermifuge, but it can be definitely poisonous to cats, and none of them can take mercury without the possibility of serious consequences. If one can be assured that there is no real danger, then such a medicine may be used. It is, however, always safer to obtain the help of a vet. who specializes in small animals, for dosage must vary according to the weight of the cat and certainly in relation to its general state of health. It is quite probable that the dose will have to be repeated within ten days to a fortnight to ensure that worms hatched from eggs left after the first treatment shall also be removed.

Little seems to be known as to the period of time during which such eggs can live outside the body of the host, and as a consequence strictly hygienic measures must be adopted to prevent reinfection. The natural habit of the cat to wash itself is always a source of danger, and it is a sound plan to wash the cat with mild disinfectant round and under the tail. A pregnant queen should always be washed several days before her kittens are due to arrive. Then particular attention should be paid to the nipples and also the fur round them.

Small weekly doses of liquid paraffin, which have been recommended for other purposes in this book, are definitely useful in preventing the accumulation of round worms. Regularity of bowel evacuations is always helpful. The tape worm, which fixes its head in the wall of the intestine, cannot, however, be removed in this way.

Some breeders have claimed great success from the use of daily doses of T.C.P. mixed with either water or milk. Care must be taken to see that the mixture is not too strong, and one teaspoonful of the antiseptic to five of milk is a safe proportion. If this treatment is given for a week it should then be discontinued. Cats do not usually find the mixture particularly palatable at first, and they may need considerable persuasion before they drink it. Once they have grown accustomed to the strange smell there is little difficulty.

There is no need for undue alarm when one notices an occasional round worm in the motion, but if the segment of a tape worm is ever seen it is very doubtful whether the animal will be able to free itself from this type without medical assistance. Just common sense and occasional preventive measures will ensure that worms cause no serious inconvenience to the stock.

Wounds

When cats are allowed to live natural lives with plenty of freedom, wounds must be expected to occur occasionally. Complete immunity from accident is too much to expect. Rarely, however, do wounds occur which are fatal, except in the case of street accidents or when the animal has been shot. Then the damage is often too extensive for the owner to be able to deal with it satisfactorily, and the services of the vet. must be sought, as it is quite probable that an immediate operation may be necessary.

The wounds with which the owner will deal unaided are those which occur as the result of some slight mishap when the animal may be running in the garden or even in the house.

Glass often causes a wound which bleeds profusely at the time, but which rarely causes any further trouble when normal clotting has started. When a cat jumps on to a piece of glass the part usually cut is the foot. Wounds of this type are said to be incised and are straight-edged. As bleeding may be considerable, the first object is to stop the flow of blood. This can usually be done by bathing with cold water in which some mild disinfectant has been mixed. One can decide the right quantity of disinfectant to use by looking on the bottle. This bathing is also important from another point of view, as it will cleanse the wound and ensure quick healing. Disinfection is doubly important when it is a foot that has been cut. Incised wounds are sometimes caused when an animal falls through a pane of glass, as may happen when it lands heavily on a garden frame. When this happens the wound may occur in any part of the body, although it is much more likely to be on the legs or sides. If the cut is at all long, and at the same time deep, stitching may be necessary. In an emergency this can be done by the owner with sterilized silk, but a professional should be asked to deal with the matter if possible. With all wounds it is far safer to apply an antiseptic dressing, and to cover this with firm bandaging. Wounds heal far more quickly if the cat is not allowed to lick them.

Sometimes a wound has a jagged edge instead of being clean cut, and this type is called lacerated. It is often caused by

some blunt-ended object which tears rather than cuts. A cat jumping down from a tree may tear its side on the end of a broken branch, or it may get caught in barbed wire and tear its flesh as it frees itself. When the damage is of this kind, the hair round the wound must be cut away or it is likely that infection will follow. Bathing is again necessary, and as a jagged wound usually takes longer to heal, daily dressings will be advisable. In this case bandaging is essential, and it is also wise to keep the cat more closely confined until healing is complete.

Barbed wire or loose ends of wire sometimes cause another type of wound when the wire penetrates directly into the flesh. In this case the opening to the wound may be small, but its depth into the flesh may be considerable. A puncture wound of this type is the most difficult with which to deal, as surface healing may take place while there is still infection beneath. Thus it must be one's object to keep the wound open until there is no possibility of deep-seated trouble which might lead to the formation of an abscess. Syringing out such a wound, by using a hypodermic syringe filled with a saline solution (one teaspoonful of salt to a pint of warm water) usually promotes quick healing.

Y

Young Stud, The

By the time a male kitten is about four months old the breeder of experience has already been able to form a very fair estimate of the animal's possibilities as a show specimen. If a male is not likely to do well on the show bench his value as a public stud is very limited, for rightly or wrongly it is the male who becomes a champion who is sought after for his services.

Bearing that fact in mind all males which are not prospective sires should be neutered before they are six months old.

The animal which is to be retained for breeding must be early accustomed to the life he must lead when he is mature. It is quite impossible to allow an entire male complete freedom about the house, for it is the exceptional individual only whose house manners are not a nuisance. Everyone knows the unpleasant smell which bears proof of the recent presence of an unaltered male. It is mere cruelty to punish a stud for his unwholesome habits, for instinct is far stronger than the fear of punishment.

It is thus clear that the stud must be given his own permanent quarters, and the earlier he gets used to the partial isolation that his duties will entail, the kinder it is to the cat. To keep him about the house as a pet until he matures, and then suddenly banish him to an outside house, shows a lack of understanding on the part of the breeder which it would be difficult to forgive.

All changes should be gradual when one is dealing with any kind of livestock, and it is by a gradual process that the young stud must grow accustomed to living on his own.

It is quite a mistaken notion to regard the stud as a being apart, for that is far from the truth. He appreciates affection and attention quite as much as does any female cat, and every attempt should be made to see that he has it. If you cannot afford to spend some time with him every day, and also give him a chance of outside exercise when he is under control, it is far better not to keep a stud at all.

The age at which a young male matures cannot be stated within narrow limits, for so much depends upon the individual. One

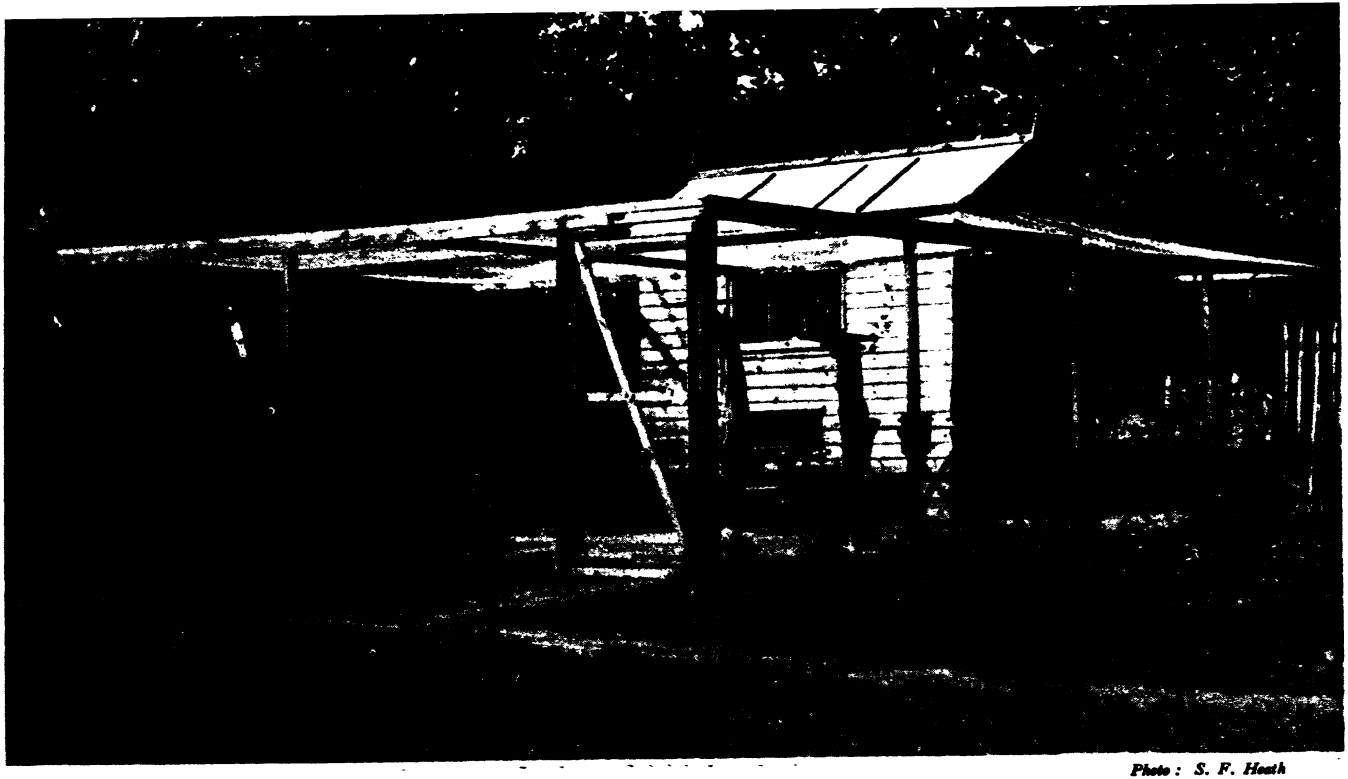


Photo : S. F. Heath

OUTDOOR STUD HOUSE

can, however, safely introduce him to his first female when he is twelve months old, being careful to note his reactions to this new experience. In all probability he will appear blissfully ignorant of what is expected of him, and certainly no attempt should be made to force him to perform a function for which at present he is obviously not fitted. Should he show keenness, however, he may be allowed to mate his first queen.

Some studs are particularly slow in developing and do not sire their first kittens until they are two years old. When a young male is a late developer some breeders try to hasten his maturity by the use of patent nostrums, but this practice is to be deprecated. Provided the cat is strong and active, and his growth continues normally, there is no need for impatience. If, however, later experience should prove that the particular male is not only late in developing, but is also lacking in sexual desire, that is entirely another matter, and it would be unwise to attempt to retain him at stud. His own unnatural character might well be passed on to his offspring.

It should be an invariable rule that the first queen introduced to the young stud must be one who has had considerable experience and is unlikely to become annoyed at his blundering efforts. Confidence in these matters can only be gained by experience, and it is most important that his confidence should not be shattered at the first encounter. A good-tempered and steady queen can be of the greatest assistance to the young stud, whereas an inexperienced and flighty queen may not only upset him temperamentally, but also maul him at the same time.

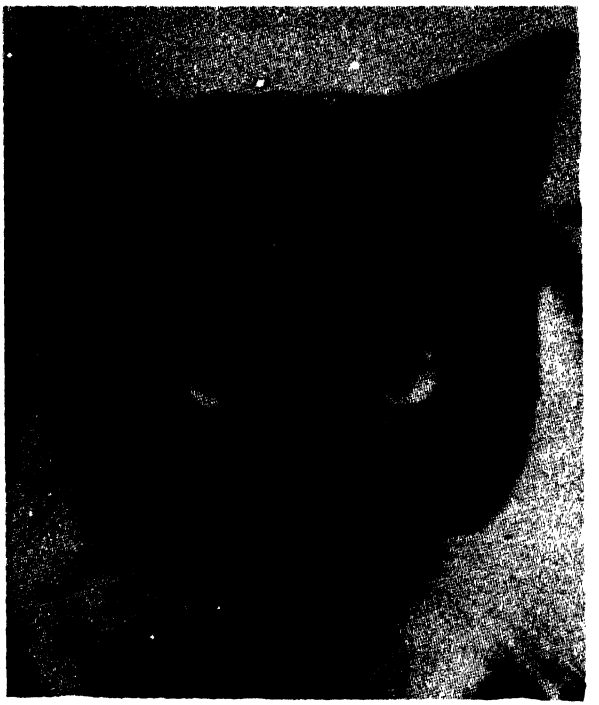
The breeder must see that the young stud does not exhaust himself in an attempt to achieve a successful mating, and a strict time limit must be put on his efforts. Certainly ten minutes is the maximum time which he should be allowed with the queen. If this advice is not obeyed serious consequences may follow, for a number of young studs have died of heart failure as a result of the nervous and physical strain which they were allowed to endure at this time.

Some young males will allow the breeder to help them, but others are merely put off by human interference and refuse to make any further effort.

Three unsuccessful attempts on three consecutive days should be the signal that the animal is not yet ready for stud work, and several months should elapse before a further attempt is made.

Even if the stud proves himself a sire when he is about a year old, he certainly should not be used again for several months. Sexual and physical maturity are separated by many months,

and until he is fully two years old his use as a stud must be strictly restricted to one queen each month. To argue that there have been young males capable of being used much more frequently does not really affect the argument, for one must confine attention to the normal animal.



KINKO

BIBLIOGRAPHY

HISTORY OF FOUR FOOTED BEASTS, Topsell, 1658.
ANIMAL BIOGRAPHY, Bingley, London, 1813.
THE BOOK OF CATS, Ross, Griffith & Farran, 1868.
THE DOMESTIC CAT, Stables, Routledge, 1876.
THE CAT, St. George Mivart, Murray, 1881.
CATS, THEIR HUMANE AND RATIONAL TREATMENT, Stables, Chambers Journal, 1883.
CATS PAST AND PRESENT, Champfleury, trans. Cashel Hoey, Bell & Sons, 1885.
THE CAT, Rule, Swan Sonnenschein, 1887.
OUR CATS, Harrison Weir, Clements, 1889.
WILD TRAITS IN TAME ANIMALS, Robinson, Blackwood, 1897.
A BOOK OF CATS, Chance, Dent, 1898.
THE CAT, HISTORY, DISEASES AND MANAGEMENT, Cust, Drake.
RABBITS, CATS AND CAVIES, Lane, Dent, 1903.
THE BOOK OF THE CAT, Simpson, Cassell, 1903.
MY CAT, Bailey, Phœnix Press, Taunton, 1906.
THE CAT, Barton, Everett & Co., 1908.
THE CAT IN HISTORY, LEGEND, ART, Marks, Elliott Stock, 1909.
OUR CATS AND ALL ABOUT THEM, House, Watmoughs.
CATS LONG-HAIRED AND SHORT, Soame, Methuen, 1933.
CATS, Simmons, McGraw-Hill Book Co., 1935.
THE SIAMESE CAT, Wade, Methuen.
DISEASES OF THE CAT, Hamilton Kirke.
INDEX OF DIAGNOSIS, Hamilton Kirke, Baillière, Tindall & Cox.
ANIMAL BREEDING, Hagedoorn, Crosby Lockwood.
THE STUDY OF HEREDITY, Ford, O.U.P.
MENDELISM AND EVOLUTION, Ford, Methuen.

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